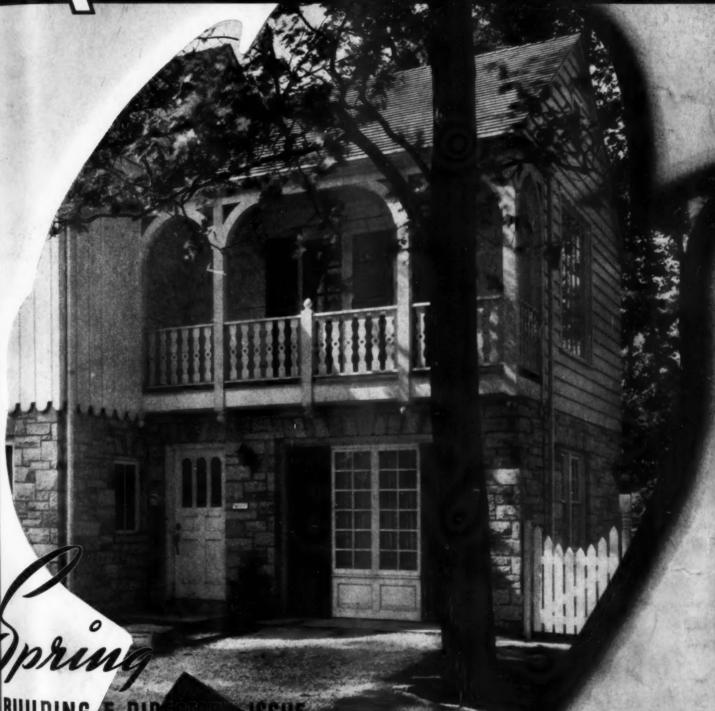
BUILDING AGE

APRIL, 1941 - 25 CENTS



BUILDING & DI

LOW COST OF GOOD CONSTRUCTION

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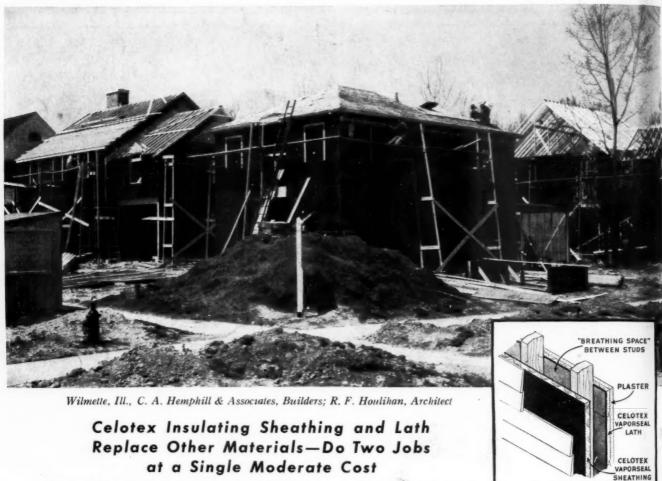
Pine

NY

TODAY MORE CONTRACTORS THAN EVER ARE GIVING OWNERS

MORE FOR THEIR MONEY

WITH CELOTEX GUARANTEED INSULATION



THERE'S simple logic back of the increasing choice of Celotex Guaranteed Insulation. When you make one material serve two purposes well, at less than the cost of the two materials it replaces, you save money for owners.

Celotex Vapor-seal Sheathing replaces other sheathing and other insulation. Celotex Vapor-seal Lath replaces other lath and other insulation. Used together, these famous products provide all the weather protection

any house needs. More than that, this protection is guaranteed in writing for the life of the building,* safeguarding the owner's

Celotex is common-sense insulation. It's worth your careful investigation. Write for latest specifications!

PRODUCTS BUILDING

INSULATING SHEATHING, LATH, INTERIOR FINISHES ASPHALT SHINGLES, SIDING, ROLL ROOFING HARD BOARDS . ROCK WOOL BATTS, BLANKETS GYPSUM PLASTERS and LATH and WALL BOARDS

Sales Distributors Throughout the World

THE CELOTEX CORPORATION

919 NORTH MICHIGAN AVENUE

CHICAGO, ILLINOIS

Published monthly by Simmons-Boardman Publishing Corporation, 105 W. Adams St., Chicago, Ill. Subscription price, United States, Possessions, and Canada 1 year \$2.00; 2 years, \$3.00; foreign countries: 1 year, \$4.00; 2 years, \$7.00. Single copies, 25 cents. Entered as second-class matter Oct. 11, 1930, at the Post Office at Chicago, Illinois, under the act of March 3, 1879, with additional entry as second-class matter at Mount Morris, Ill. Address communications to 105 W. Adams St., Chicago, Ill.

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HELPS SELL MORE HOUSES FENESTRA HOW





EASY OPENING NO STICKING



SCREENED IN A



FROM 3 DIRECTIONS



STORM SASH COSTS LITTLE

"Think of it, Mrs. Home Buyer, you'll never have to sit backward on the sill to wash this Fenestra Package Window on the outside—you wash it on both sides safely from within the room."

Thus you point out to your prospects the important modern advantages offered by the new low-cost Fenestra Package Window, and sell more houses. See sketches at left.

A high-grade factory-built unit, the Fenestra Package Window comprises a Bonderized Steel Casement Window, already glazed, redwood cased and outside trimmed, with attractive, bronze-finish hardware. You install it easily, on the outside, in 5 minutes; on the inside in 8 minutes-COM-PLETE . . . The first cost is amazingly low; and you save big money on installation. Also you save service callsthere's no warping, sticking or rattling . . . Get Fenestra facts and prices, and sell more houses. Use coupon.



IN 5 MINUTES



INSTALLED INSIDE IN 8 MINUTES

THE NEW LOW-COST enestra PACKAGE WINDOW

DETROIT STEEL PRODUCTS COMPANY 2260 East Grand Boulevard, Dept. AB-4, Detroit, Michigan

Please send me the new Fenestra Package Window Catalog and Price List.

Name_

Address_

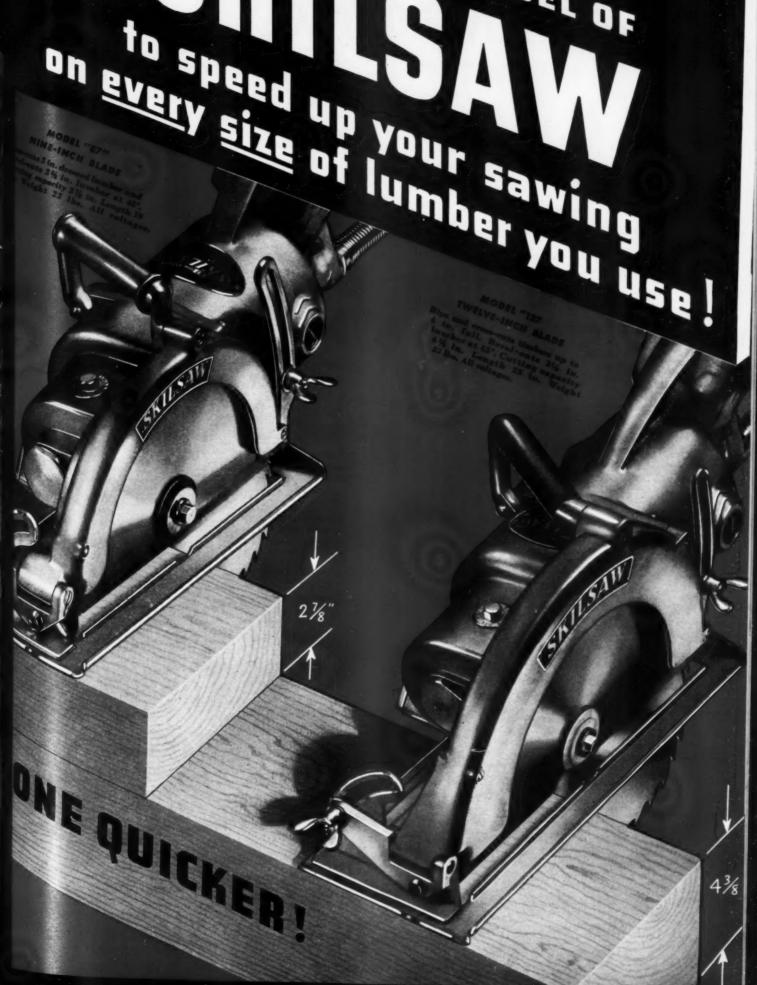
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ILLINOIS la 1 year \$2.00; Chicago, Illinois

EVERY cut you make in EVERY size of building lumber . . . can be made quicker, easier, cheaper with these four models of SKILSAW-the best built, fastest cutting, easiest-to-operate electric saw on the market. Each of these four models has every engineering improvement to insure trouble-free service over a long stretch of years: Ouick adjustment for depth of cut. Easy wing-nut adjustment for bevel cuts. Telescoping guard rotates on ball bearings. Blower keeps line of cut clear of sawdust. Oversize long-life gearing and finest quality ball bearings insure smooth operation, eliminate vibration. Only SKILSAW has all of these quality construction features . . . that's why SKILSAW is more for your money and will make more money for you on every job! 9 POWERFUL MODELS FOR WOOD, METAL, STONE, COMPOSITIONS SKILSAW, INC. • 5031 Elston Avenue, Chicago 36 East 22nd Street, New York — 52 Brookline Avenue, Boston — 182 Main Street, Buffalo—15 South 21st Street, Philadelphia—2902 Euclid Avenue, Cleveland—2124 Main Street, Dallas—918 Union Street, New Orleans—29 North Avenue, N. W., Atlanta—2645 Santa Fe Avenue, Los Angeles—2065 Webster Street, Oakland—1535 Grand Avenue, Kansas City, Mo.—1115 E. Pike Street, Seattle. Canadian Branch: 85 Deloraine Avenue, Toronto

THERE'S A MODEL OF SKI ISA to speed up your sawing



TO HEIGHTEN HOME APPEAL

● Better bathrooms—better kitchens—better heating—mean better home sales. Yet the plumbing and heating quality your prospects want—the quality that sells houses—can be LOW in cost, if you choose Crane. Here are 3 CRANE low-cost ways of making profitable home sales.



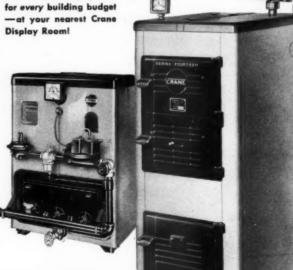
1 Customers know and want Crane Quality equipment—and you can give it to them. The Homemaker sink and cabinet unit shown above is compact—convenient—and is moderate in cost.

See Crane Quality-priced



2 This LaSalle matched bathroom group has the eye appeal that makes your prospects stop and look—the quality that makes them stay and buy.

3 Here are two boilers that bring healthful, radiant warmth to the low-cost home. At the left is the 2WG gas-fired hot water boiler—completely automatic. At the right is the No. 14 boiler for steam or hot water systems—for hand firing of coal, oil-burning, or stoker firing.



CRANE

CRANE CO., GENERAL OFFICES: 836 S. MICHIGAN AVENUE, CHICAGO

VALVES . FITTINGS . PIPE . PLUMBING . HEATING . PUMPS

NATION-WIDE SERVICE THROUGH BRANCHES, WHOLESALERS, PLUMBING AND HEATING CONTRACTORS



ANOTHER IDEA INSPIRED BY A STOCK MOULDING!

like Kawneer Moulding No. 3835, illustrated at the left, can often go a long way toward solving the design problem of a store front!

This moulding has been used, in the shoe store shown above, as the principal feature of the front—to supply the life and lustre that only Kawneer metal can give. Details show how Moulding 3835 has been combined

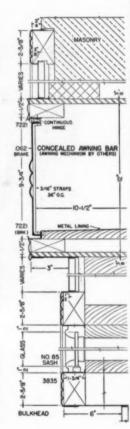
with new No. 85 Rolled Sash and other standard Kawneer Rolled Construction in the complete front.

DELIVERIES ASSURED

Fortunately for the store front industry, Kawneer is in a position to supply your requirements in this important store front year, with Kawneer Rolled Store Front Construction, including the famous fully resilient rolled sash which assures maximum protection for show window glass.

FREE ILLUSTRATED MAGAZINE

The Kawneer Front is published for architects and builders interested in store front work. It includes pictures of new store fronts and data on new Kawneer products. Write today if you are not on our list. THE KAWNEER COMPANY, NILES, MICHIGAN.



IT'S EASY TO DESIGN AND INSTALL STRIKING

STORE FRONTS

ACTORS

No. 3835



Read the Chicago. 24 EVIDENC, R AVENUE 55 May 14, 1940

Mr. McCray, Company, Oshkosh, Wisconsin.

Our firm has been experimenting recently with the I thouse installation and finishing of Rezo doors. I thouse you might be interested in knowing some of the results. I thought Dear Mr. McCray:

Although the carpentry involved in the installation of your doors shows practically no difference comof your doors shows practically no difference com-pared to the former six panel door that we had inting using, there is a substantial saving in the painting of the doors. Figuring it on the basis of a coat painting job, we found to completely finish the results. of the doors. Figuring it on the basis of a three the coat painting job, we found to completely finish the nere later time was 37 minutes, and on a six panel Rezo door, the time was 72 minutes, almost double, material door, the time was 72 minutes, almost mount of material also was a slight difference in the amount of paint used, amounting to three-fourths of a gallon of paint used, amounting to three-fourths of a gallon of paint used. used, amounting to three-fourths of a gallon of paint less on the Rezo doors for girteen doors less on the Rezo doors for sixteen doors.

Of course the reason that we had given up the six panel door originally was the question of service all and maintenance after completion. On practically we and maintenance after where they were painted of the panel type doors. Where they were painted. of the panel type doors, where they were painted, we found that because of humidity desired in a modern found that because of humidity desired in a modern house today. that this caused a contraction and ar found that because of humidity desired in a modern and exhouse today, that this caused a contraction and expansion of the panels along the stiles, and practically pansion of the panels along the had required touching up every panel door job that we had required pansion of the panels along the Stiles, and practically appears panel door job that we had required touching up every panel door job that we had This annoyance and by painters after completion. every panel door job that we had required touching to the same and the Hoping that this information might be of some interest Mr. Chas. E. Joern is chair-

to you, I am

man of the taxation committee of the Chicago Real Estate Board—is a member of the Chicago Board of Underwriters and a director of the Chicago Building Congress.

Mr. Joern is nationally known as an important mem ber of the real estate and building industry. His comtract to build the LIFE Magazine fostered home in 1939 and also in 1940 in the Chicago Area.

ESTABLISHED OVER A QUARTER OF A CEN

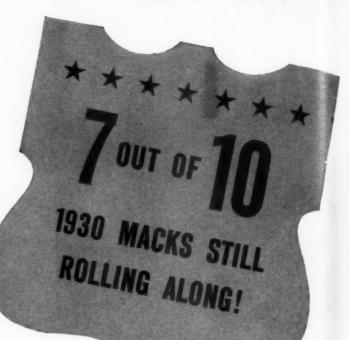
the ONLY cell-type door, with YEARS of El

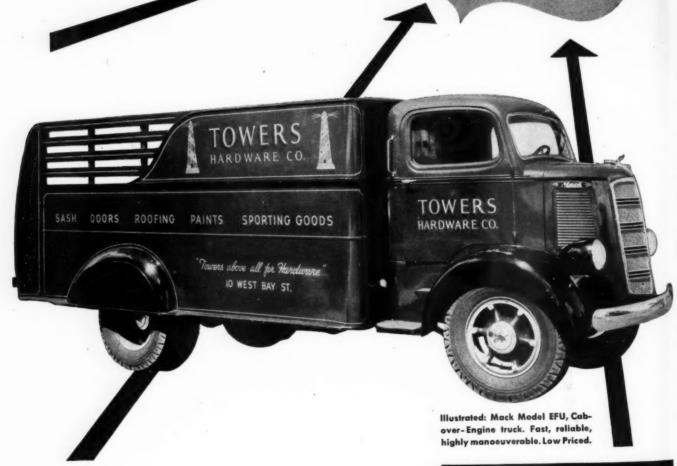


OFFICIAL FIGURES PROVE

MACK THE STURDIEST

TRUCK GOING





● State registration figures compiled by R. L. Polk & Co., recently published in Automotive News, show 72% of 1930 Macks in active service. This record beats all other makes. What's more—when it comes to trucks bought before 1930, Mack has 33% more units on the road than any other make! Easy to understand, in the light of these facts, is Mack's world-famous reputation for superior dependability, stamina, and long-term economy.

MACK TRUCKS, INC., NEW YORK, N. Y.

The Most Complete Line of Trucks in the World—1 to 45 Tons and all "Heavy Duty"

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BRIXMENT Makes a More PLASTIC Mortar!

One of the most important characteristics any mortar can possess is *plasticity*. Within certain limits, plasticity is the greatest single factor not only in the *economy* of the brickwork, but also in its strength, its neatness and its resistance to the passage of water.

One of the most outstanding characteristics of Brixment mortar is its unusual plasticity. For nearly twenty-five years, bricklayers all over the United States have agreed that the working qualities of Brixment are comparable to those of straight lime putty. This exceptional plasticity makes it easy for the bricklayer to secure neat, economical brickwork, with the brick properly bedded, and

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the joints well filled. And because of this unusual plasticity, a bag of Brixment will carry three full cubic feet of sand and still make an ideally workable mortar.

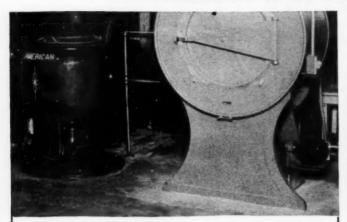


BRIXMENT For Mortar and Stucco

Louisville Cement Company, Incorporated, Louisville, Kentucky. Cement Manufacturers for Over a Century.

Speed Concreting Jobs At Greater Profit!

How builders save time and money on many kinds of work with ATLAS HIGH-EARLY CEMENT



A QUICK MOVE in this laundry was achieved with Atlas High-Early cement! A washer and dryer were removed and reset on a new base. At 12 noon, machines and old floor were taken out—a new concrete base 20 inches thick was finished by 3:00 P. M. Next morning the machines were bolted to the new floor and back in operation! Lima, Ohio.



TIME AND MONEY saved by paving the roadway of this filling station, Tracy, Minn., with Atlas High-Early concrete! Look at these dividends! Five days in time saved in protection and curing and 14 days business saved, as the station was opened that much sooner—thanks to Atlas High-Early.



IT WAS WINTER when this floor was installed, so Atlas High-Early concrete was used to speed the job. Three days were saved in setting the piers. Protection and curing costs, and the danger from freezing were reduced. The job went through without a hitch. Pittsburgh, Pa.



RUSH REPAIRS were called for at this Super Service Station, Waco, Texas, where the traffic through this driveway totals 200 cars and trucks every day! So Atlas High-Early concrete was placed one day and was opened to traffic within 72 hours afterward.

ON MANY A JOB Atlas High-Early cement will help you speed the job at greater profit. The pictures show how four builders in different parts of the country speeded construction and reduced costs with Atlas High-Early cement! These jobs are typical examples of how you can use this cement to your customer's advantage and your profit. Here are the reasons why Atlas High-Early was a time-and money-saver on the jobs shown: it gains working strength rapidly, and so cuts time required for protection and curing as much as 60% to 70%—it often permits earlier stripping and re-use of forms, thus reducing form costs—and it produces serviceable concrete in much less than the usual time.

Specify Atlas High-Early cement. Write today for a copy of "Case Histories of Days & Dollars." Universal Atlas Cement Co. (United States Steel Corp. Subsidiary), Chrysler Building, N.Y. C. Offices: New York, Chicago, Philadelphia, Boston, Albany, Pittsburgh, Cleveland, Minneapolis, Duluth, St. Louis, Kansas City, Des Moines, Birmingham, Waco.

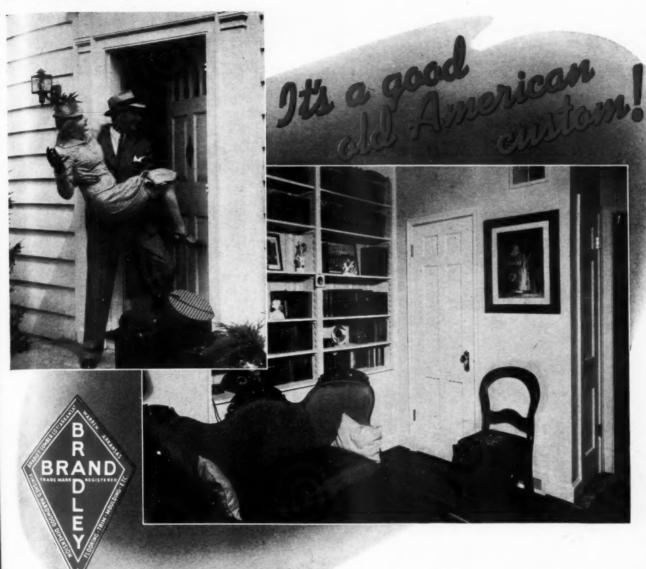
AB-H-30

ATLAS HIGH-EARLY CEMENT

A UNIVERSAL ATLAS PRODUCT



41.



Perennial as springtime itself are spring weddings . . . and spring home building, so brides and grooms may have a place to live happily ever after. It's a good old American custom . . . and spring is here!

Here, at Bradley's, we're stocked and ready to help you meet this spring demand with premium quality, sure to make any bride proud of her home ... and friend husband certain he's a smart buyer. Hardwood floors, for instance, dear to her heart and pride, in Bradley's famous straight-line strip or quaint plank, in fine-textured Oak . . . Gum, Oak and Pine trim, mouldings and finish for beautiful woodwork and paneling in painted or stained finishes . . . dimensions, boards, siding, window jamb and trim in well-seasoned Arkansas Soft Pine that works easily, stays put and doesn't bleed through paint on exterior surfaces.

Bradley Brand Products are obtainable from local retail distributors anywhere in the United States.

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These are the extra values which provide enduring fine appearance and service with every Bradley installation . . . these, the reasons why builders who know ask for Bradley Brand.

BRADLEY LUMBER COMPANY of Ackarsas



1941.

DOUBLE COURSED CEDAR DOUBLE WALLS * NEED SHINGLE WALLS THER INSULATION NO OTHER INSULATION

TESTS made in the laboratory of the College of Forestry, University of Washington, on a roof section of No. 1 grade, 18-inch Certigrade Shingles, laid 5½ inches to the weather on solid wood sheathing, show that such construction is twice as effective in preventing heat transmission as the best grades of ½-inch insulation boards commonly used for this sheathing.

What is true of roof construction is equally true of side-wall construction. In double-coursing of side-walls with Red Cedar Shingles on solid sheathing you have a sturdy wall of good insulative qualities. The method of slightly lapping the outer course of shingles over the under-course produces beautiful, deep shadow lines, and this, with the economical wide weather exposure possible with double-coursing, is in keeping with modern design in home building.

This simple technique does not re-

quire specially trained craftsmen. Shingles are butt nailed with two rust resistant, 5 d., small headed nails for each shingle, driven 3/4 inch from each edge, about two inches above the butt line. (See detail.) The lowest or beginning course should always be tripled in order to introduce the right tension into the succeeding courses. A piece of shiplap or other rabbeted lumber is used as a straight edge.

Because double-coursed shingles are face nailed at the butts, it is possible to use No. 2 shingles for the outer course with No. 3's for the concealed layer, effecting a remarkable saving.







ANOTHER REASON YOU TURN OUT BETTER WORK with

ARKANSAS SOFT PINE

Freedom from pitch in this all-purpose wood explains its remarkably soft texture through which you can drive every nail tight and know it will hold. That means each joist, stud, board and rafter will be firmly anchored in the framing, and stay put. By the same token, window jambs, sills, siding and outside trim of Arkansas Soft Pine hold snug at every joint and mitre.

Remember, too, that just as this soft texture safeguards sound framework, it also insures smooth, workmanlike finished surfaces; because it takes paint, enamel or stain and holds them, absorbing the primer evenly and carrying the intermediate and final coats uniformly, with no risk of bleeding, discoloration or raised grain.

These are the extra profitable values you get in the time-proved soft texture of Arkansas Soft Pine... values which protect your workmanship from foundation plates to picture moulding... qualities that insure your reputation as a builder of sound, lasting construction.

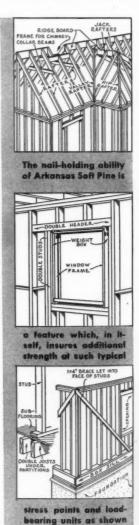
Ask for our Builders' Handbook, giving you complete information about Arkansas Soft Pine, including construction details, stress tables, grades to specify in all locations, painting and finishing instructions. Write today for YOUR FREE COPY.

Arkansas Soft Pine is trade and grade marked, qualifies for Federal Specifications and is sold by retail lumber dealers east of the Rockies.

ARKANSAS SOFT PINE BUREAU

488 BOYLE BUILDING

LITTLE ROCK, ARKANSAS





Eye appeal starts you off on the right foot — for you can always depend on Mueller's handsome, modern, compact, space-saving designs to make a good impression on your prospect:

Name appeal makes your claims believable. Mueller, a manufacturer of heating equipment exclusively, for 84 years, advertises consistently to people interested in new homes. They recognize this well-known name — and make another mental note in your favor.

Luxury appeal gets them all. They want the extra comfort, convenience, healthfulness of a really modern heating plant. Mueller enables you to offer it, and still remain within the cost budget.

Economy appeal — Each Mueller furnace is designed to burn a specific fuel (coal-oil-gas) with maximum efficiency — so fuel bills are moderate, giving your houses a good reputation for low heating cost.

Make heating a live factor in your selling. Engineering service available on Mueller jobs. See your local Mueller dealer; send for Mueller's free illustrated literature.

MUELLER Milwankee

GAS-FIRED WANTER AIR CONDITIONING FURNACE, se—moderate
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Compact, for the smaller home. Available,
in price, for the lizer for more uniform,
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COAL-FIRED
WINTER AIR
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gned for each type of fuel—thereto operate, bringing the benefits of ing and winter air conditioning

modern heating and winter air conditioning within reach of even modest budgets . . . Unbiased — offering the industry's most complete range—Mueller is the logical source of information about home heating.

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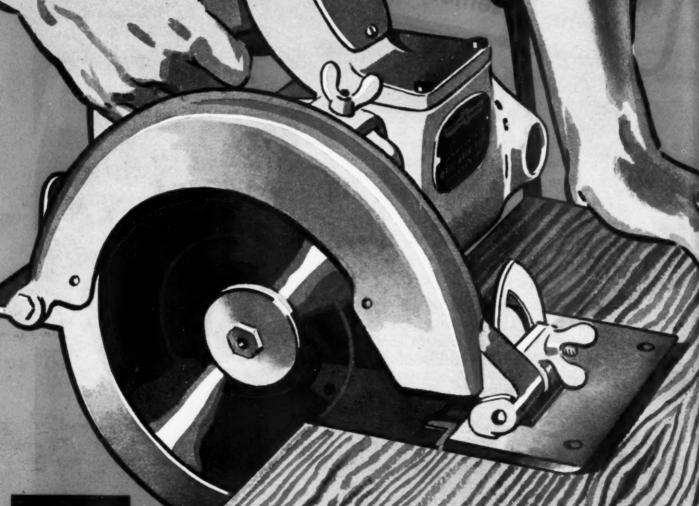
Gas Furnaces Oil Furnaces Coal Furnaces
Gas Boilers Gas-fired Unit Heaters

Name...

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Address..

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Cut Days Off Jobs 2 Decker Electric Saws

SEND FOR Black & Decker's Free "Saw Handbook" Today! Contains 28 pages on applications, construction and features of Black & Decker Saws and Accessories. Ten times faster than hand, Black & Decker Saws boost the sawing speed in cutting all structural lumber. Cut wood, metal, compositions—most any material. Operate from electric socket or portable generator. Are kept safe by instant-acting telescoping bladeguard. Easy adjustments for depth and angle of cut. Four powerful, speedy models for any type job—from fast trim work to extra deep sawing in heavy timbers. The most powerful, fastest Electric Saws on the market—whose performance and dependability are backed by the world's largest manufacturer of portable electric tools. No matter where you are, there's a B & D jobber near you, ready to demonstrate Black & Decker's famous speed and quality on your own sawing operations. The Black & Decker Mfg. Co., 766 Pennsylvania Ave., Towson, Md.

AT LEFT—Black & Decker No. 85 Electric QUICK SAW cutting off porch gable end. Note easy, one-band operation of this popular model.

BELOW—Black & Decker Saw speeds up operations on heavy construction. B & D No. 95 (illustrated) has power and extra depth of cut to zip through heaviest lumber.

LEADING DISTRIBUTORS EVERYWHERE SELL

Beek & Tools Tools Decker

PORTABLE ELECTRIC TOOLS

"ELECTRIC TOOL HEADQUARTERS"

This Free "SAW HANDBOOK"
acked with facts and illustrations
lowing how Black & Decker
lectric Saws speed up operations
ad make more profits for builders

Send for it TODAY!

every type job.

Awstin & Smith



Mr. Austin of Atlanta says:

January 3,1940

As a matter of curiosity I would be interested in knowing whether any of your plants have exceeded our sales for last year which total slightly in excess of four and one-quarter million on a single brick basis.

January 6, 1941

Sold over four million again this year.

YOU owe it to yourself and your future to learn how you too can become an exclusive DUNBRIK Manufacturer like Mr. Austin or Mr. Smith. Learn how this automatic line production machine will produce quality products from local low cost raw materials-how these products are made in a full range of colors, shades and textures -how the multiple sizes reduce construction costs-how you too can become the owner of a profitable franchise protected

Write today for free books. They tell the complete story. No obligation.

Mr. Smith of Portland says:

You perhaps are quite well acquainted with the extensive line of cement products we manufacture.

We find in the operation of the various machines for producing concrete units the variation of the human element controls the output, and of course regulates production and ultimately governs the profit.

Our several checks have always brought us around to brick, made on your brick machine.

The automatic principle of feeding, palleting, and the straight line production principle, reduces the human element to a known quantity. We know absolutely what a brick or a dozen brick cost, and we don't mind telling you that our costs are low enough that we are able to compete with any brick on the market, insure ourselves a legitimate profit and give the customer a better brick.

W. E. DUNN MFG. CO. 450 WEST 24th STREET,

HOLLAND, MICH.

1941.

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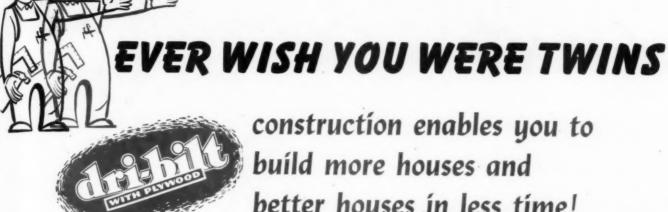
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construction enables you to build more houses and better houses in less time!



ONSTRUCTION lops weekseven monthsfrom building schedules. This is because the 5

grades of Douglas Fir Plywood serve such a variety of building purposes . . . because the big panels minimize handling, cutting, fitting and nailing . . . because they eliminate the necessity of waiting for plaster to dry. You increase your capacity . . . and that of every one of your carpenters . . . when you Dri-Bild with Plywood.



CONSTRUCTION is suited to the way you operate. If you build only one house at a

time, use the standard Dri-Bilt method in which all construction is done on the job in the traditional manner. If you are a multiple-unit builder, use the DFP Dri-Bilt method which provides for the shop-fabrication of wall and ceiling sections, etc., from the proper grades of Douglas Fir Plywood. Many builders have found that this method enables them to have 4 and 5 room houses ready for occupancy in 2 weeks or less after they start them.



HOUSES can be readily financed through F.H.A. —are approved by the Uniform Building Code.

They're more rigid . . . have proved that they can resist tornadoes and earthquakes. They're more attractive . . . have interiors that are both beautiful and mar-proof. Get complete information now. Send for free Dri-Bilt manual. Douglas Fir Plywood Association, Tacoma Bldg., Tacoma, Wn.







NEW PRODUCTION CAPACITY

Four new Douglas Fir Plywood mills were completed in 1940; three more are or will soon be in operation in 1941; the capacity of many existing mills is being stepped up. This means that the monthly production of Douglas Fir Plywood will soon reach one hundred and fifty million feet a month. It is expected that the total 1941 production will exceed a billion and a half feet—or will be nearly triple 1938 production.

The Douglas Fir Plywood industry will be able to take care of Desense orders and the orders of those regular customers whose increasing purchases have made this tremendous volume possible.

TEXT-DFPA, the type of Douglas Fir Plywood made with water - proof binder, builds smart, durable, wind-proof exteriors.

Proof exteriors.

Plyscord is the grade of Douglas
Fir Plywood to use for sub-flooring,
wall and roof sheathing. 5/16" Plyscord
makes walls 5.9 times as rigid as 1"
horizontal board sheathing.

Juse 1/4 or 3/8" Plywell or Plypane for puncture-proof interiors. Ply-wood is receptive to more finishes than any other material.



DTAMOTT WALLBOARD

SPECIFY DOUGLAS FIR PLYWOOD BY THESE "GRADE TRADE-MARKS

PLYPANEL DEPA

EXT. - D. F. P. A.





MICH.

Important Announcement
Johns-Manville

AMERICAN COLONIAL

OAsbestos Shingles

Rased on over 80 years of manufacturing experience in roofing materials, we recommend the new J-M American Colonial Asbestos Shingle as the most satisfactory and economical shingle over a period of years any home owner can buy. We believe it is one of the finest roofing products we have ever manufactured and at its new low price we recommend its selection.

Johns-Manville

JOHNS-MANVILLE

ASBESTOS AND ASPHALT SHINGLES · SUPER-FELT ASBESTOS FLEXBOARD · ASBESTOS WAINSCOTING 941.

DTING

to Builders

Now the lowest price in history for a roof of J-M Asbestos Shingles!
These new shingles are easier to apply—colorful—sure to help you sell houses faster!

HERE, we believe, is the most outstanding value in J-M's 80 years of experience in the manufacture of roofing materials...the Johns-Manville American Colonial Asbestos Shingle.

This new shingle combines all the permanence of stone with beauty such as you have never thought possible in a fabricated shingle! Consider these features—

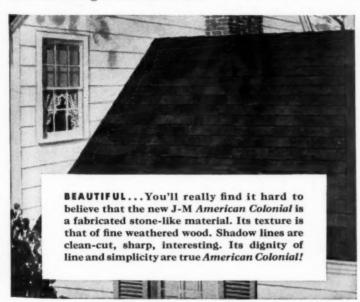
J-M American Colonial Shingles provide the texture and graining of fine weathered wood . . . clean-cut shadow lines.

And color! Handsome blends . . . a soft green, a warm red, a rich black. Also a natural gray and a white.

As for cost, this new J-M Shingle is priced so low, is so economical to apply, that roofs of this lasting material cost little more than roofs of less satisfactory materials.

Like all J-M Asbestos Shingles, this new shingle can't burn or rot, is practically impervious to weather. No periodic upkeep is needed . . . no preservative treatment.

Think what selling advantages these features give you! And remember—home owners will be particularly grateful to you as years pass and they learn the economy of having a roof as lasting as the house itself!

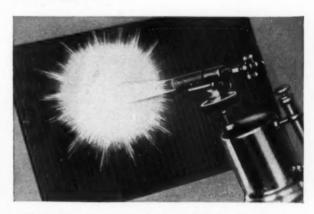


Building Materials

ROCK WOOL HOME INSULATION · INSULATING BOARD · HARDBOARD · ROLL ROOFINGS, etc.



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A new kind of home is attracting nationwide attention. And it's offering a profit for everyone—architects, builders, retailers of building materials and most of all, the homeowner.

"Design for Happiness" homes are highly livable, made brighter and gayer with glass. Built-in glass features add "eye-appeal" and utility, giving these-homes ready salability, quickly turning new home prospects into owners.

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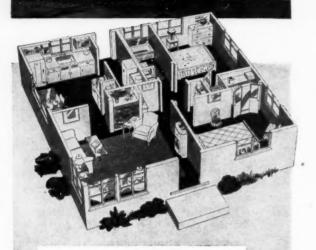
families in your community into well designed, highly livable "Design for Happiness" homes.

Write for this free, illustrated booklet describing "Design for Happiness" glass features, and for information about your part in this program. Address: Libbey-Owens-Ford Glass Company, Department AB-441, Toledo, Ohio.



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Glass features like these add Sales-Appeal to the homes you build, give a "lift" to selling remodeling jobs.



Built-in mirrors of polished plate glass increase the apparent size of rooms, adding breathing space, beauty and utility.



In this novel inexpensive arrangement of 3-panel door mirrors, half panel mirrors swing out to give angle views.



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Vitrolite (wall glass) protects bathroom walls. Easy to clean, it adds gay color that never fades.

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DOUBLE SEALING — Balsam - Wool is completely protected by a tough, impervious, protective covering.

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BALSAM-WOOL—long recognized by builders as "tops" in insulation—now takes another big forward stride! The new BALSAM-WOOL provides even greater values in a product already far ahead of its field. Today, Balsam-Wool offers new, increased thickness—new, increased efficiency—new, increased moisture protection—all at no increase in price! Here is new and greater value in Balsam-Wool

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By Nelson L. Burbank



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book furnishes the basis of a well rounded education in carpentry work. The technique of steel frame and sheet metal siding construction is explained in addition to the standard methods of wood construction.

Contents

Tools and Equipment—Tool Boxes—House Plans—Excavations—Foundation Forms—Foundations—Sills—Girders—Floor Joists—Sub-Flooring—Outside Framed Walls—Inside Framed Walls—Plumbing Framed Work—Sheathing Walls—Ceiling Joists—Roof Framing—Roof Sheathing—Cornices—Roofing—Porch and Bay Framing—Exterior Wall Covering—Interior Wall Covering—Stairs—Interior Trim—Windows—Doors—Hardware—Closets and Shelving—Finish Flooring—Finishing—Index.
1940. 3rd. 286 pages, 600 illustrations, 9 x 12, cloth, \$3.00.

Practical Job Pointers





Job pointers, kinks, short cuts and new methods of doing old jobs are described and illustrated. Some 600 ideas and modern methods of doing various jobs, as worked out by men in the building industry have been brought together and classified. They have appeared in the "Job Pointers" section of American Builder and Building Age.

American Builder and Building Age. The drawings are to scale. A seven-page index lists each item by its title and many are cross-referenced by subject. This enables quick reference being made to time, money and effort saving methods of doing all kinds of building jobs.

1940. 2nd. 130 pages, 600 illustrations, 9 x 12, cloth,



American Builder Homes

The plan book contains 24 pages of modern homes, 34 pages of standard designs, 34 pages of low cost homes and 34 pages of country and farm buildings and structures. Some 28 pages are devoted to new ideas for restyling and modernising kitchens, bathrooms, breakfast and dining nooks, recreation rooms, and dens and studies.

1926. 172 pages. 300 illustrations, 12 in

1936. 172 pages, 300 illustrations, 12 in full color, 9 x 12, paper, \$.35.

House Construction Details



By Nelson L. Burbank

Formerly Instructor, Building Vocational High School, Cincinnati, Ohio

Builders will find this book particularly helpful when making changes in a set of stock plans and when planning alterations. By referring to the detailed cross-index they can quickly locate construction details and photographs of the finished work for any part of a

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house. It shows the use of all modern building material. The layout of these details is in accordance with standardizations recommended by housing authorities wherever such have been established.

Many of these scale drawings and photographs have appeared in American Builder and Building Age. Step-by-step procedure is shown with just enough text to explain general principles. The various chapters are presented in construction sequence, from foundation to finish.

1940. 320 pages, 1,500 illustrations, 9 x 12, cloth, \$3.00.

Simplified Carpentry Estimating



By J. Douglas Wilson

Formerly Head of the Building Trades Department, Frank Wiggins Trade School, Los Angeles, California and

Clell M. Rogers

Mathematics Instructor, Venice High School, Venice, California

Explains as simply as possible how to "take off" from a set of plans and specifications a bill of material for a frame house. Rules and methods for making accurate building material lists are described and illustrated. Simple arithmetic methods are given for accurately estimating all costs. Helpful tables are included.

Much of this material originally appeared in a series of articles in American Builder and Building Age entitled "How to Estimate Accurately." Mr. Wilson's 12 years' experience in teaching the subject and his background as an estimator and builder duning meeting and in the subject duning meeting and m builder during vacation periods was drawn upon for most of the data.

1940. 208 pages, 71 illustrations, 5 x 7, cloth, \$2.50.

BOOK SERVICE DEPARTMENT

AMERICAN BUILDER and BUILDING AGE 30 Church Street New York, N.Y. 1941.

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Fir-Tex goes up fast—it saves time in actual application. Fir-Tex speeds up the entire job, too—because there is no waiting for plaster to dry. Fir-Tex applicators can start work as soon as the plumbing and wiring are in. And as soon as the Fir-Tex interior finish panels are nailed on, the occupant can move in.

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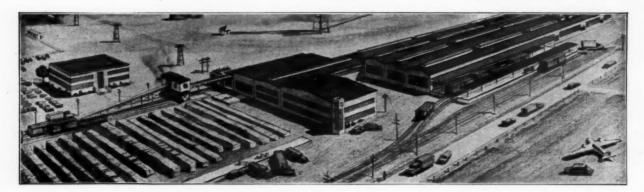
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A complete, new ultra-modern line of Flintkote structural and decorative insulation board products made from native Southern timber

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Builders and roofing contractors everywhere are familiar with the

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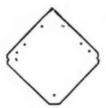
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Fireproof, good looking, quickly applied—Flintkote asbestos-cement is first choice siding on many Gov-

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Introduced in 1940 after more than 10 years of careful development and field testing, Flintkote Cold Process, without fire or fuss, is already being widely used for new built-up roofing of bonded qual-

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 Flintkote dealers recommend and sell Flintkote nationally advertised building materials because they know every Flintkote product provides a bigger dollar's worth of protection, assures the lasting satisfaction which builds good will.

ASBESTOS SHINGLES

Dutch Lap Hexagonal

ASBESTOS SIDINGS

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Shake Siding
Straight-Edge Sidings
Tapertex Siding
Woodgrain Sidings

ASPHALT SHINGLES

Tapered Strips
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Stalwart Strips
Hexagon Strips
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ASPHALT SIDINGS

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RDBOARD PRODUCTS
Flintboard
DeLuxe Flintboard
RexBoard
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HardBoard Tile
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INSULATED BRICK SIDING

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ROCK WOOL INSULATION

Granulated Rock Wool Dura Bats (Paper-backed) Pre-Pac Rock Wool Long Fibre Rock Wool

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BUILT-UP ROOFING MATERIALS STATIC ASPHALT COATINGS

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Wood for Venetians Association
Venetian Blinds



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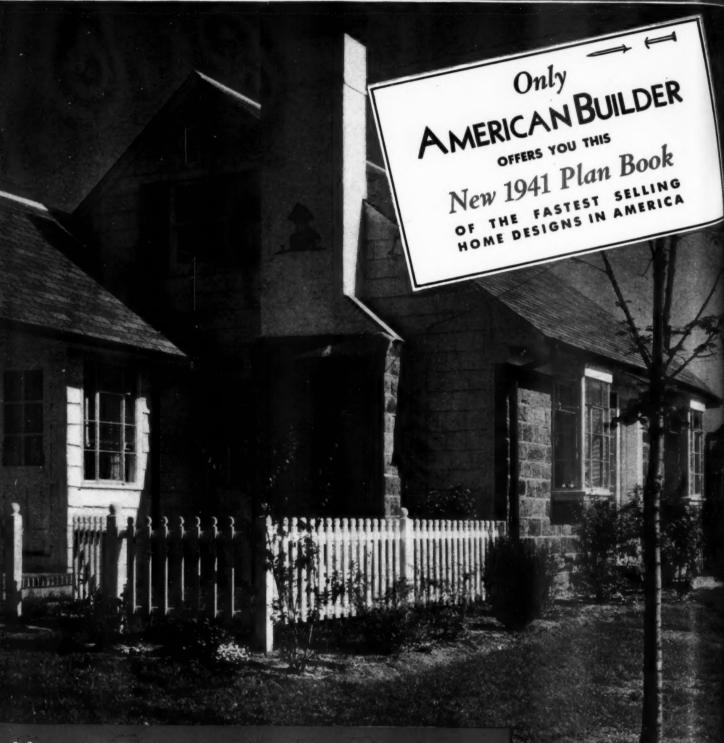


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"U. S. S." Steels For Kütchens
Westinghouse Electric & Mfg. Co.
Westinghouse Refrigerator
Youngstown Pressed Steel Co.
Division Mullins Mfg. Co.
Kütchens

SECURITY HOMES



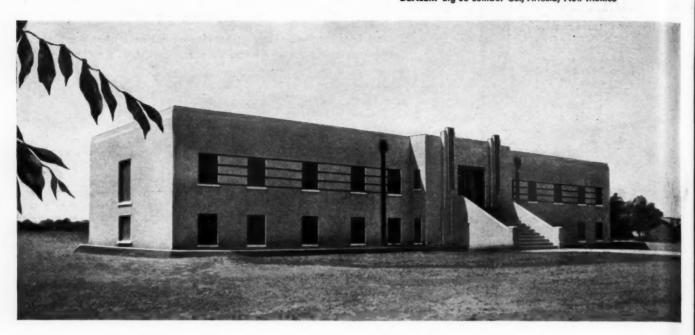
Home Ownership for Renters GOOD DESIGN SUGGESTIONS

CLIP AND RETURN THIS COUPON AMERICAN BUILDER 30 Church Street, New York, N. Y. **AMERICAN** Enclosed is \$..... for which enter my subscription for One year \$2 Two years \$3 BUILDER Renewal | Gives you ten or more new home designs in each and include with my subscription at no extra cost a issue-plus plans, elevacopy of the new 1941 Plan Book, "SECURITY HOMES" construction features, job pointers, and all the latest news of the Name Street entire building industry. City State State Occupation This offer is good in U. S., its Possessions and Canada CONTENTS Detroit Approves Better Harry J. Durbin House "Thermos Bottle" Home in Portland, Me. 38 "Models on Parade." Flexible 3-Level Plan for Wide Range Toxas "House on Stilts" Unusual Home of Jan Novel Arrangement by Leonard W. Features Interiors Designed for Modern Living. Besinger and Associates of Chicago. of Styling Rooms for the "America At Home Tyler, Texas. Exhibit." 1940 New York World's Fair. Early American Long Island Home..... Northwest Styled Puget Arthur E. Allen, Architect: George Characterful Cottage How to Peg Rental Costs Through Building Now for Security... Bain, Architect. Novel Year Round Home on the Pacific 43 Colonial with Downstairs Streamlined 5-Level House in Extreme "The Best Investment You Can Make" Hartford, Conn., Hon Advice of a Father to His Son and West, Architect. Daughter-in-Law on Home Ownership. Modern Styling. Two Good Exteriors-On Good 100 Years Either Way..... Shingled Colonial Home at East Fifteen Reasons for Building Now..... . I. R. Stich and F. E. G Hampton, N. Y.: Polhemus & Coffin. What One Dollar Per Day Buys in a Plywood Model Home One Good Plan, Three Salable Designs. 46 Home Ownership Versus Rent Paying..... 11 Details of the Los Ang Popular 6-Room Home by Mott Bros. sands The Only "Indestructible Security"............ 12 Modern and Period Variations for Six the Sun." Russell Sage Says, "Real Estate is an Evolve New Technique Three Attractive Exteriors for One The Vagtborg "Garden Plan by Elmer C. Carlson. Security on "An Acre of Good Earth" 14 Homes Solve Side Yard Proble Big Market Seen in "House and an Three Distinctive Kansas City Homes 50 Acre" Projects for People of Low In-Downstairs Study in Stone come Who Raise Part of Own Food. One-Story Homes by William Five-Room Home by Quality Products Save More Than They Cost Provide Security Against High Defense Workers Rush to Buy Security How to Get "SECURITY HOMES" Homes at \$22 Per Month.... Chicopee, Mass., Builder Sells Low Cost Coucrete Masoury Homes to Glance through the Table of Contents for SECURITY HOMES as reproduced in part on this page and you Construction Methods That Reduce Costs 20 will see a few of the designs and features contained How George MacDowell and H. D. Fiedler Keep Prices Low. in this valuable 1941 Plan Book. But there is much more than this small sample—SECURITY HOMES "\$36 a Month-No More Rent Increases" 22 has 180 pages, 81/2 x 11, packed from cover to cover Weber Brothers of Buffelo Building with up-to-the-minute features, articles, and a wealth Houses That Can Be Owned "For Less of low cost home designs to build today. Get your copy of SECURITY HOMES by returning the coupon with your remittance for a subscription or renewal to \$25-a-Month House Has 27 by 28 Foot AMERICAN BUILDER at the rate of \$2 for one year, \$3 for two years. SECURITY HOMES is obtainable

in this way only.

sic Plan

ARTESIA MEMORIAL HOSPITAL: Artesia, New Mexico ARCHITECT: Richard Gardner, Denver, Colo. BUILDER: B. G. Robinson, Artesia, New Mexico DEALER: Big Jo Lumber Co., Artesia, New Mexico



"save time...cut down on cost"... SAYS BUILDER USING LEHIGH PRODUCTS



Can you think of two better reasons for using a product than that it saves you time and money? In connection with his use of Lehigh products in the Artesia Memorial Hospital, Builder Robinson wrote us an unsolicited letter from which we lift three quotes.

Quote No. 1: "Walls, columns and outside stucco are of normal cement."

But Builder Robinson knew that Lehigh Early Strength Cement—making service-strength concrete 3 to 5 times quicker—would speed up key portions of the job, accelerate other construction. As he puts it:

Quote No. 2: "In order to save time we used Lehigh Early Strength for our slab work. This was handled in three sections, and we had the advantage of using the same forms, thereby cutting down on cost of lumber and labor."

His comment on Lehigh Mortar Cement brings us to

Quote No. 3: "The tile for curtain walls was all laid in Lehigh Mortar Cement. This was our first experience with this product; because of its plasticity and lack of shrinkage we hope to make much wider use of it in our future jobs."

On some jobs, as with the Artesia Memorial Hospital, you will find advantages in using all three Lehigh cements. On every job you'll get top performance from whichever one is called for. Ask your dealer for all three Lehigh cements.

Lehigh

EARLY STRENGTH CEMENT

for **service-strength** concrete in a **hurry**

LEHIGH PORTLAND CEMENT COMPANY . ALLENTOWN, PA. . CHICAGO, ILL. . SPOKANE, WASH.

More Value For Your Wall Money...





HERE'S a modern wall finish you should know about. It's Armstrong's Linowall-a permanent, linoleum-like material that costs only about half as much as other permanent finishes.

With this truly washable wall covering, you can make your houses much more attractive without adding to their cost. For example, you can have a bathroom and a kitchen finished with Linowall, instead of only one room finished with more expensive permanent materials. Or you can have special inset designs as illustrated.

Then there's the news value of Linowall to consider. People want new things-beautiful things-practical things! Linowall combines all three. Thirty-one eye-catching colorings are yours to choose from-plains, wood grainings, burled and marbleized effects. In addition, Linowall can be inexpensively inset with linoleum, wood, metal, glass, or plastics. Being flexible, it can be streamlined over corners.

Never Needs Refinishing

Women like Linowall because a damp cloth removes spots and ordinary stains; because Linowall resists denting and cracking; and because the rich colors do not wear off. Expensive refinishing is never necessary.

Why not get complete facts about Linowall now? See Sweet's, or write today for Walls of Enduring Beauty. Armstrong Cork Company, Floor Division, 1218 State Street, Lancaster, Pa.



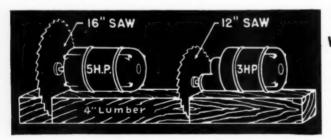
COLONIAL BLUE LINOWALL inset with motif in heavy gauge blue linoleum gives this bath-room distinctive, practical walls. This is just one example of the countless design possibilities you have in Linowall. These walls are money-saving, too—easily washable, waterproof, permanent. The floor is Armstrong's No. 025 Marbelle Linoleum.

ARMSTRONG'S LINOWALL

Made by the makers of Armstrong's Linoleum A World of Difference in a Radial Saw! . . .

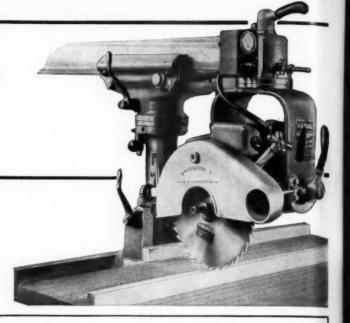
WALKER-TURNER GEARED MOTOR INCREASES RIM FORCE

For more than three years we worked and studied to obtain one great mechanical advantage for a radial saw that has for many years been recognized as a vital need. This was the problem of getting the shaft down close to the work so that smaller saws, providing greater rim force, could be used. In the Walker-Turner Radial Saw we have succeeded beyond our most optimistic hopes. It is chiefly due to the Walker-Turner Miracle Motor—a shockproof geared motor of the most advanced design. As compared with the ordinary motor, having the saw blade direct-connected to the rotor shaft, the Miracle Motor can make equal cuts with much smaller blades and, therefore, with greater rim force. This is clearly illustrated in the drawing below.



There is also a very substantial saving in the cost of saw blades, dado heads and abrasive wheels, due to the smaller sizes regularly used in the Walker-Turner machine. It is really five machines in one. Besides doing all kinds of sawing (cross-cutting, ripping, mitering, etc.) it does accurate dadoing, shaping, routing and tenoning. It cuts wood, plastics, metals, ceramics and many other materials.

MAIL COUPON FOR INFORMATION





*PATENTED SHOCKPROOF GEARED MOTOR

The very heart of the Walker-Turner Radial Saw is the exclusive Walker-Turner Shockproof Geared Motor. A special mechanical cushion or shock absorber protects the gears against breakage under overload, relieving the strain on the gears at the instant of overload. Self-resetting.

*Patents: U.S.A. #2,236,854; Great Britain #527,508; Canada #391,285

WHY THE W-T GEARED MOTOR INCREASES RIM FORCE

The rim force of a saw equals torque divided by radius. Therefore, the smaller the radius of the saw, the greater the rim force. As an illustration of the efficiency of the Walker-Turner Geared Motor, note that in the drawing a 12" blade on the W-T Motor will make a 4" cut, which requires a 16" saw on the ordinary motor. And while the 3 h.p. Walker-Turner Motor delivers a rim force of 15.8 lbs. in, the ordinary 5 h.p. motor delivers only 14.7 lbs. in.

•	
	WALKER-TURNER CO., INC.
	1041 Berckman Street, Plainfield, N. J.
	Send further information on your Radial Saw.
	Name Title
	Company
	Street
	City State



WALKER-TURNER MACHINE TOOLS FOR METAL, WOOD AND PLASTICS

DRILL PRESSES · BAND SAWS · BENCH SAWS · TILTING ARBOR SAWS · LATHES JIG SAWS · RADIAL SAWS · RADIAL DRILLS · BELT AND DISC SURFACERS · JOINTERS SPINDLE SHAPERS · GRINDERS · FLEXIBLE SHAFT MACHINES · CUSTOM BUILT MOTORS



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cracking, or color fading. Installation is simplified with Veos. A patented self-locating foundation sheet eliminates expensive wall preparation, insures perfect alignment of every tile and saves time in application. It also provides 1/2" of standard thermal insulation.

A Veos installation saves 75% in weight. Ideal for ceilings as well as walls. Six standard sizes of tiles and ten pastel colors at no cost over black and white, permit unlimited use of color and ornamental design. In remodeling work, Veos is installed right over existing walls, without muss, fuss, or litter-and in less time than it takes to do a good paint job. Veos is proving its many advantages in millions of square feet of installations.

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If no Veos dealer is in your immediate locality (see classified telephone directory), write us for complete data.

DAVIDSON ENAMEL COMPANY, Dept. B, CLYDE, OHIO

The Artistry of Ancient Ceramics PLUS the Permanence of MODERN STEEL

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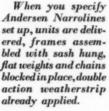
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HIO



Set units in wall, nail wide blind stop to studding, nail head and sill windbreaks





to studding, nail head and sill windbreaks to headers and plates. The job is done, all ready for trim.

ONE ANDERSEN JOB SELLS ANOTHER

The word-of-mouth advertising that contractors get when they use Andersen Narroline lifetime windows in the homes they build is a powerful factor in bringing those same contractors additional contracts. One of the priceless assets of a contractor is the good will and advertising received from his satisfied home owners. Andersen Narroline Windows play a large part in winning this good will.

"There's nothing I hate worse than complaints and service calls on leaking or sticking windows. They cost me real money and besides, the owner of that house is a poor advertisement for me. So I install Andersen Narroline doublehung Window Units in every house I build. That means I just install 'em and forget 'em. And believe me, when a housewife learns what it is to have really good windows in her new home, she becomes a real booster for the contractor who put them in."

JUST STOP a minute and figure it out. It isn't what a window costs delivered on the job—it's the installed cost that you pay for. And that installed cost includes what you pay a man to service window complaints.

So more and more contractors are using factory fitted, precision built Andersen Narroline Window Units. They never need cutting, fitting, or trimming. Right now, they are priced the lowest in Andersen history. So when you consider their installed cost, chances are they'll save you real money. Hundreds of contractors who watch costs carefully have found that to be a fact.

ASK YOUR LUMBER DEALER FOR DETAILS AND PRICES ON ANDERSEN NARROLINE COMPLETE WINDOW UNITS

ANDERSEN

CASEMENT UNITS

NARROLINE UNITS

BASEMENT UNITS

Andersen Corporation
BAYPORT, MINNESOTA

ONLY THE RICH CAN AFFORD POOR WINDOWS

ANDERSEN
HORIZONTAL
GLIDING UNITS
MASTER FRAMES

Majestic PRODUCTS R THE MODERN

MISCELLANEOUS NECESSITIES



Majestic manufactures a wide assortment of high-quality castings and other metal building necessities. Such items as Access Doors, Ash Pit Doors, Ash Dumps, Flue Thimbles, Porch Column Bases, Cistern Rings and Covers, Stack Type Clean Out Doors, Ventilating Foundation Grates, Bell Trap Cesspools and Sewer Tile Strainers. For these items call Majestic. Majestic manufactures a wide

Majestic Steel Basement Sash combines adjustable ventilation, weathertight-ness and other conven-ience features with dura-



COAL CHUTES

21 years of leadership makes "Majestic" synon-ymous with coal chutes—a valuable basement accessory that ends broken windows and ruined sash. A Majestic Chute is also burglar-proof and carefree in service.



A quality chute (at left) offered with solid or glass panels. Glass panels are set in rubber and protected by a steel shield that drops into place automatically when chute is opened. Gravity lock can be operated by convenient pull cord. Heavy steel, covered with asphaltum paint.

Majestic "Special" Chute (at right) has extra heavy rolled steel frame, electrically welded corners, sturdy hinges, automatic burglar-proof lock and heavy pressed steel door. Finished with asphaltum. A real buy in low-cost chutes.



Majestic Grade Line Chutes (at left) put the exterior opening on the grade line. Built for hard service. Special door flange makes this chute practically watertight. Gravity latches operate with chain and pull cord. Body angle iron re-enforced at edges and corners. Finished in rust resisting asphaltum.

INCINERATORS

Majestic Incinerators offer the home the modern, healthful, safe and convenient way to dispose of garbage and rubbish. Offered in types pose of garbage and rubbish. Offered in types to fit any pocketbook. Attaches to ordinary flue. Does not interfere with heating plant. Small, attractive and built to last for years. Fired only when filled. No odors in basement. infrequent ash removal necessary. prisingly low in cost.



Model No. 30 (at left) requires no fuel other than the combustible rubbish that the average household places in it when filling Fired only when filled. Burns wet and dry garbage. Costs nothing to operate. 3 bushel capacity. Low cost will astound you!

Gas fired model (at right) for those who prefer this type. Chim-ney draft dries garbage so re-quires only a few cents of gas per week. Other models for coal or wood fuel of similar design and construction are



Items shown on this page are but a few of Majestic's extensive line of quality building products fully described and illustrated in the Majestic catalog which will be gladly sent upon request. You'll find it a valuable buying guide because Majestic has been known to builders, dealers and home owners for quality and as reliable manufacturers for more than 35 years.

CIRCULATOR FIREPLACES



Majestic "Master" Circulator (at left) has ingenious "Radiant Blades." Adds 91% more heat-generating surface. Also extra efficiency from enclosed smokedome. Constructed of heavy gauge steel; built in damper; angles at side and other quality features.

The Majestic Circulator works on same effi-The Majestic Circulator works on same efficient principle as modern warm air furnace. Constructed of steel and enclosed in any desired mantel design it sends warm air to all parts of the room—can also be piped to other rooms. Cold air is taken in at bottom, heated, and then passes out at top. Choice of artistic opening grilles offered. A fireplace that will not smoke. Saves time, labor and material. Also saves fuel.

Majestic "Special" Cir-culator (at right) is a low cost quality unit. Heavily constructed; built in damper; and proportioned throughout for efficient for efficient operation.
All joints are electrically
welded. Offered in
widths from 28 to 52



FIREPLACE ACCESSORIES AND FIXTURES



Majestic also offers a selection of grilles for inlets and outlets in circulator fireplaces; cranes, fireplace ornaments, and various singenious controlled-draft baskets grate. Door at bottom regulates fire. Ideal for circulators! Regulates heat and saves fuel. Also check with Majestic for an attractive line of fireplace fixtures including screens, andirons, firesets, coal hods and wood holders in various designs and finishes. Attractively priced.

UNDERGROUND GARBAGE RECEIVERS



A Majestic underground Garbage Receiver "buries" the garbage problem. It is completely hidden in the ground except for the cov-er. A tight fitting foot-operated lid prevents odors escaping and eliminates oth-er unsightly, unhealthy fea-tures of the old garbage can. Garbage will not fer-ment or freeze.

SEND FOR FREE COPY OF COMPLETE CATALOG

The MAJESTIC COMPAN 786 ERIE STREET Huntington, Indiana

FIREPLACE DAMPERS

Majestic Dampers assure top efficiency, prevent smoking, control draft, close almost air-tight, simplify construction - and feature Majestic quality throughout. Open damper valve forms deflector shield for down draft. Poker control is standard equipment . . . face control at slight



extra cost. Built-on lintels save time, materials, labor. Heat, smoke, soot and rust can't impair efficiency of damper or con-

Above is the "quality" damper. Accurately designed, cast construction and with ingenious

Above is the "quality" das signed, cast construction damper. A "Top" value. The "Special," shown at right, has a cast semi-steel body, steel plate valve and furnished with or without built-on lintel.



KITCHEN VENTILATING FAN



MILK AND PACKAGE RECEIVERS



Majestic's "Deluxe"
Package Receiver is of
extra heavy construction and beautifully
designed. Interior door,
when open, forms convenient shelf. Fully
insulated. Automatic
lock for outside door

venient shelf. Fully insulated. Automatic lock for outside door. Package deliveries can be safely made inside the house with Majestic Receiver. No tracking in dirt—no unexpected intrusions—no danger of theft. After delivery is made outside door automatically locks. Full insulation keeps out cold and noise and protects deliveries. Harmonizes with any interior. Attractively priced.

Model "P" (at right) a low cost, fully insulated receiver with easily in-stalled adjustable body. Door opens at side. Auto-matic outside lock. Attract-ively finished.



OUTDOOR FIREPLACE EQUIPMENT



For building an efficient outdoor fireplace of any exterior design Majestic offers a full line of the required metal equipment; complete units, tops, sories. Illustrated is a complete unit with adjustable grates for using coal, charcoal or wood. Offered in two sizes with bar type or solid top. Economical.

WHEEL GUARDS



Majestic Wheel Guards deflect wheels and prevent hubs from striking masonry. Offered in corner and jamb type. Heavily designed and made in cast semi-steel. Height 22". Easy to install.

WINDOW WELLS

Majestic Window Wells are guaranteed for 20 years. They save cost when windows are below grade line. Offered in round or straight type and a wide range of sizes. Built of 14 gauge steel with solid steel top edge. Smooth finish elimin from settling and better reflects light.



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Here's a fact that builders know from long experience:

Paints mixed with pure white lead resist weather better. It's a pretty safe rule: the more white lead, the better the paint!

White lead comes by its durability naturally. It is made from lead-a metal so tough it has few equals in combating the elements.

White lead, too, shrugs off heat waves, cold snaps, rain, snow-without cracking and scaling. It wears slowly, cleanly and evenly-keeping its good looks a

So when ordering paint it's a good idea to remember this: You can't get a more durable paint than one made with 100% pure white lead.

But using white lead doesn't mean the paint itself must be white. You can tint white lead to almost any color you wish.

White lead assures a long paint lifesomething that prospective buyers are bound to like. When you consider that it costs no more than regular quality paints, this is one case where the best is really cheapest.

LEAD INDUSTRIES ASSOCIATION 420 Lexington Avenue, New York, N. Y.

HOW TO SAVE MONEY ON PAINT JOBS

You'll find this and other valuable information in a free booklet, "WHAT TO EXPECT FROM WHITE LEAD PAINT." Send for your copy today.



ASK YOUR DEALER ABOUT THIS. In addition to the regular pasts form, pure white lead is now available as a ready-to-brash paint in convenient, popular-size containers at paint dealers' overywhere. You'll find this new paint a timesaver.



Users Prefer Iron Fireman ver Other Automatic Heat

You profit when you build homes for low operating cost . . . by installing Iron Fireman automatic coal heat.

First, you win the endorsements of purchasers. Here are the results of an independent survey made in nine states by one of America's largest research organizations (name on request):

91% of the Iron Fireman users who formerly burned expensive automatic fuels say money-saving Iron Fireman gives them better heating.

An average fuel saving of 43%, in comparison with the automatic fuels previously used, was reported.

Second, you make your homes more saleable, because Iron Fireman operating savings help pay the first cost on hundreds of dollars worth of additional modern conveniences.



Don't let High Fuel Bills become a "2nd Mortgage" on the Houses you are building

If Iron Fireman saves one of your customers \$5 a month, in comparison with other automatic fuels, then this \$5 can be added to the FHA payment . . . paying for another \$850 of modern conveniences. These advantages are clearly outlined in an informative bulletin, "How to Build or Buy a House for Low Operating Cost." Use this bulletin in talking with prospective clients . . . it will help you build business. Mail coupon for free copies.





FREE... copies of Folder for Your Customers.

IRON FIREMAN MANUFACTURING CO. Portland, Ore.; Cleveland; Toronto. Mail to: 3132 W. 106th Street, Cleveland.

- _ copies of "How to Build or Buy a Home for Low Operating Costs."___ ☐ Send me No obligation.
- ☐ Send data on Iron Fireman stokers for new homes.

Address____

City



Only \$389.50* ... Complete AUTOMATIC Winter Airconditioner

NO COAL HANDLING . . . This new Iron Fireman Winter Airconditioner has a built-in "Coal Flow" stoker which feeds coal from bin. Full thermostatic control. Warms, filters, humidifies, circulates air.





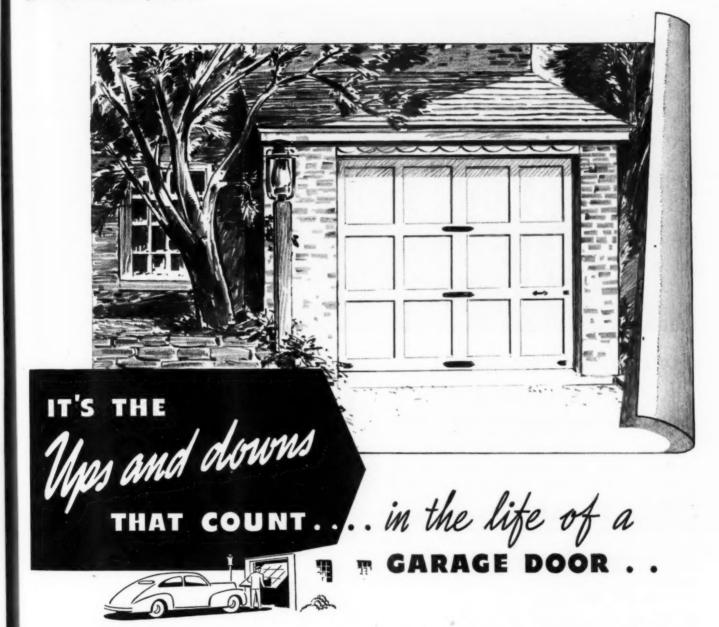
Coal Flow \$226*

feed stoker. No manual furnace or boiler.

Standard \$179.50*

The most popular bin- Adds only \$1.20 to \$1.50 per month to FHA terms! coal handling. Quickly Gives automatic heat installed in any solid-fuel with low first cost and low operating cost.

*All prices include complete automatic controls; plus freight and installation. Slightly higher in Canada.



Every car owner wants his garage door to open easily and safely regardless of the weather. The CARR-dor goes up and down easily and quickly—in all kinds of weather. Snow, ice or wind, do not affect the smooth, easy operation.

Your public now demands overhead acting garage doors, and the CARR-dor meets every requirement of quality, construction, performance and economy. Just as economical to install as its reasonable price, the CARR-dor with its simple construction provides trouble-free operation.

The CARR-dor only requires 1½ inches of clearance at the top, and only 2 inches at the sides. Get more complete information, details and illustrations of actual installations. Mail the coupon today.

CARR, ADAMS & COLLIER CO.

WOOD WORK

DUBUQUE, IOWA

SEE 14/51 IN SWEET'S CATALOG, 1941

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the GARR-dor

CARR, ADAMS & COLLIER CO.,
Dept. AB-4, Dubuque, Iowa
Please send me, without cost or obligation,
literature and information on BILT-WELL
CARR-dors.
I am a BUILDER DEALER ARCHITECT

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ess____State_

Sales Appeal INTO YOUR BATHROOMS WITH MIAMI CABINETS AND ACCESSORIES

Sparkling Models in

1—All-Stainless-Steel

2-"Alumilited" Aluminum

They're new—exclusive—beautiful and decorative beyond anything you've seen—MIAMI'S latest achievement . . . irresistible in their appeal to home buyers everywhere.

Two distinct new lines—one in All-Stainless-Steel—another in Aluminum with "Alumilited" lifetime finish. Both lines offer advantages of lasting, rustless metals that will never check, crack, craze or discolor—that harmonize with any color scheme—cabinets whose beauty will be undimmed by time. To see these new units is to know the public will demand them for unending service—for real economy—for more beautiful bathrooms.

MIAMI Bathroom Cabinets are known and used throughout the world. There are models to meet the requirements

of every type of home, hotels and other private and public institutions. Make your homes more salable—build reputation for quality and value—increase your profits—by installing MIAMI Cabinets and Accessories.

(Below) The Master's Ensemble: Chrome framed, mirror unit flanked by two fluorescent light brackets and two side cabinets. Chrome-framed, mirror-lined, recess shelf below center mirror.



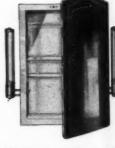
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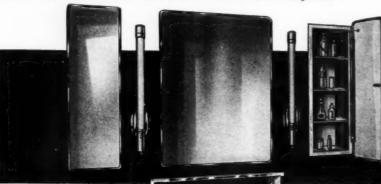
(Above) Venetian type cabinet with chrome-framed mirror and No. 5 light brackets.

(Below) All Stainless Steel Cabinet with framed mirror.



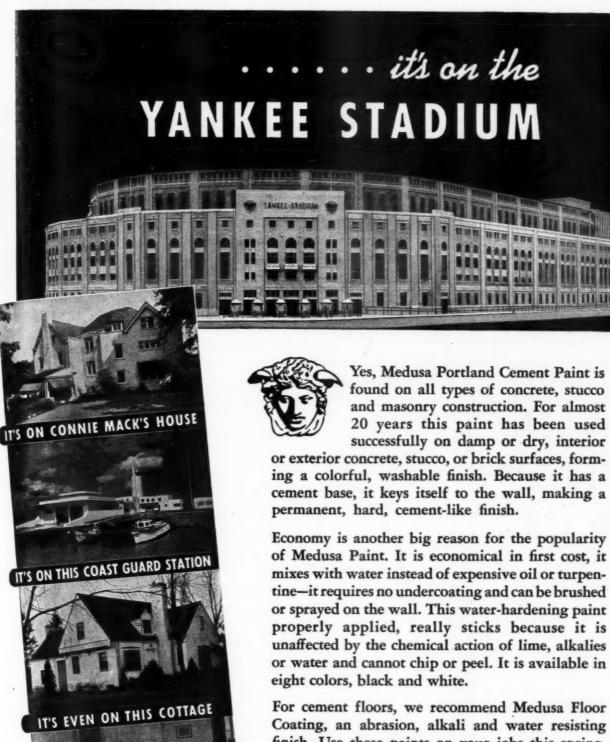


Aluminum Cabinet with stainless steel framed mirror and No. 5 light brackets. Nite Lite inside of cabinet



MIAMI CABINET

The PHILIP CAREY COMPANY
MIDDLETOWN. OHIO.



For cement floors, we recommend Medusa Floor Coating, an abrasion, alkali and water resisting finish. Use these paints on your jobs this spring. Send the coupon below for your complimentary copy of the book "How To Paint Concrete, Stucco, Masonry and Other Surfaces." It gives complete details on these paints.

AND ON THESE BASEMENT WALLS

MEDUSA

PORTLAND CEMENT PAINT

MEDUSA PRODUCTS COMPANY

Division of Medusa Portland Cement Company 1002 Midland Building, Department B, Cleveland, Ohio

Gentlemen: Please send me a copy of the book "How To Paint Concrete, Stucco, Masonry and Other Surfaces."

Name.....Address....

City State

Medusa Products also made in Canada by Medusa Products Co. of Canada, Ltd., Paris, Ontario

ALUMINUM, DEFENSE, AND YOU





WE INTERRUPT our regular messages to report what's what with aluminum.

AT THE MOMENT delivery for civilian use must make way for defense. Everybody knows the reason. Defense requires and is using more aluminum per month than peacetime America ever consumed.

NEVERTHELESS, we intend that no one shall have to forego the things aluminum can do best one minute longer than we can help.

THERE IS NO SHORTAGE of bauxite, nor of anything else, except time. And Father Time is being given the race of his life.

WE ARE MOVING, for example, 35,000 yards of earth a day at Alcoa, Tenn., to get 50 acres under a single roof by September. It will require 193 carloads of roofing felt. Some of the operations in that plant will start even before the walls are up. That's an annual rolling capacity for 120 million pounds of high strength alloy sheet coming along fast.

LAST MARCH WE STUCK the first shovel in a cow pasture near Vancouver, Wash. In September a 30 million pound plant was delivering metal. It has been doubled, already. A third 30 million pound unit starts delivering in April; a fourth in May; a fifth in June. From cow pasture to 150 million pounds annual capacity in 15 months.

A SIDELIGHT: To make that 150 million pounds of aluminum, we first have to build factories to make 120 million pounds of carbon electrodes. We have to obtain the equipment (transformers, rectifiers, and the like) to feed 162,500 kw. of electricity into the reduction furnaces. This is a generating capacity equal to that of the state of Delaware plus twice that of Mississippi.

WHAT OF TOTAL PRODUCTION? In addition to Vancouver, further installations are being made at other of our plants, so that in less than a year their total capacity will be more than double that of 1939, when 327 million pounds were produced.

IN THE VERY MIDST of this demand we have lowered the price of aluminum ingot 15%. We state, without reservation, our hope that the price can be still further reduced.

DEFENSE APPLICATIONS use aluminum for exactly the same reasons you do. Defense priorities on aluminum simply say that there are some fundamental things that aluminum does supremely well. It will do them still better as important lessons in production, fabrication, and application are learned from every additional pound being produced and used.

YOU, SIR, in planning that new house, had hoped to have aluminum windows; to paint it with Aluminum House Paint. We want you to know that we intend to make this shortage as short-lived as possible. Your aluminum is on the way. It is a promise.

ALUMINUM COMPANY OF AMERICA

Here's How Lyon and Brown Sold 77 Homes Instead of 50!



J. W. Lyon and **Walter Brown**

Leaders in Oklahoma City and outstanding in the country, these builders believe in selling "better living" rather than "shelter."



Prices Range From \$4,000 to \$8,500

REALTORS DKLAHOMA CITY OKLA

March 1, 1941

Mr. H. W. Trekell General Electric Supply Corp., Oklahoma City, Oklahoma

On March 24, 1940, we opened new Douglas Place
Addition and planned to build during the year a total of
fifty G. E. equipped homes in the \$4,000.00 to \$8,500.00
fifty G. E. equipped homes in the total that at the end of
price class. We were pleased to find that and sold seventy
price class. We were pleased to find that and sold seventy
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price class. We were pleased to find that and sold seventy
price class. We were pleased to find that and sold seventy
price class. Dear Mr. Trekell:

We attribute our phenomenal success in the sale of these homes to being able to offer in our houses the additional selling features that the G. E. equipment offers. We find in our selling that home buyers today selling that four walls and shelter. We are so thoroughly pleased with the acceptance of G. E. want better living instead of just four walls and shelter. We are so thoroughly pleased with the acceptance of in the equipped homes that we expect to use G. E. equipment in equipped homes that we expect to you to know that we every home we build in now Douglas Place Addition in the future. It might be of interest to you to know that have sold these homes as fast as we could build them, many of them before they were completed.

We wish to take this opportunity to thank you and your organization for the splendid cooperation and service you have given us. With sincere thanks and appreciation, we beg to remain.

Very truly yours,

JWL/lh

.County.

operating equipment. And note what they say about public acceptance - remarks typical of those made by other leading builders who use G-E heating plants, wiring systems, and kitchen appliances because they belp sell bouses. Perhaps the G-E Home Bureau's

Lyon and Brown have built their suc-

cess on firm ground — a combination

of good construction and high-quality

House Merchandising Plan can be of help to you, too. It's a plus service that includes Architectural Engineering, Promotional and Advertising aids designed to increase your sales. Why not find out about it now? There's no obligation.

General Electric Home Bureau, Dept. AB-414 1285 Boston Ave., Bridgeport, Conn. Please send information on your House Merchan-I am an Architect Building Own Home Building For Resale

about the SELLING FEATURES of

GENERAL (%) ELECTRIC

Home Equipment

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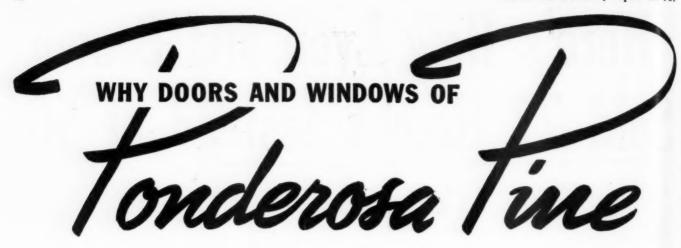
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ARE SUPERIOR...

★ Now the public is being told where and how to use more doors and windows! People are being shown why Ponderosa Pine doors and windows are better.

You know where and how to use doors and windows. But now we are telling people who build and remodel why Ponderosa Pine has more to offer in superiority, service and satisfaction.

Here's why! First, "Ponderosa" is pinel That means a close and uniform grain that won't "raise." Edges don't splinter. "Ponderosa" is soft-textured, light in color. It has unexcelled smoothness and excellent appearance when worked by machine or by hand. Any architectural woodwork design can be beautifully executed in "Ponderosa." That's why doors and windows of it are popular stock items in so many retail lumber yards. Its ability to take paint or enamel, to hold it better and longer, is well known. Those are the main reasons Ponderosa Pine has been preferred for doors and windows for over 40 years. They are your best assurance for lasting satisfaction!

"Ponderosa" doors and windows give home builders, home buyers and home remodelers *ideas* for lighter, airier homes in a new book called, "Open House." See BETTER HOMES & GARDENS, AMERICAN HOME, HOUSE & GARDEN, and HOUSE BEAUTIFUL for May. In them begins *Ponderosa Pine's* national advertising campaign offering "Open House," the new idea book, *free*. It tells the story of Ponderosa Pine Woodwork excellence—gives your recommendations strong backing.

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Write for your copy of "Open House" and full details about how this program can help you in your business.



PONDEROSA PINE WOODWORK

111 WEST WASHINGTON STREET . CHICAGO, ILLINOIS

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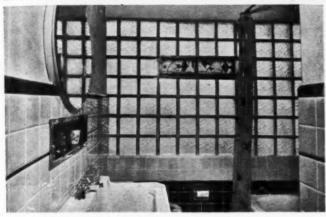
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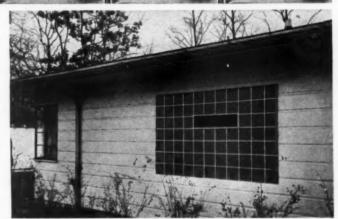
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A GLAMOROUS BATHROOM—the kind that sells houses but economical enough for popular-priced homes. The Insulux panel gives plenty of light . . . maintains privacy ... insulates effectively. See exterior at right.



ARCHITECTURAL BEAUTY is added to exteriors by Insulux Glass Block panels. They harmonize with every type of home design—form a feature that helps you sell. Make your houses "brand-new" with Insulux Glass Block.



MODERN BEAUTY gained at low cost with corner installation of Insulux Glass Block. Women love a bathroom like this—well lighted, sparkling, easy to keep clean. You save tile costs when Insulux forms the walls. EYE-CATCHING Insulux Glass Block panels tell prospects that your new houses are really new. Shown above is exterior of corner installation like interior at left. There's a place in every home you build for Insulux.

Use Insulux Glass Block to give buyers what they want in bathrooms—floods of light... real privacy... more comfort...modern beauty. Insulux Glass Block are economical for builders—save cost of sash, tile and

painting. And they do sell homes. Send coupon for other suggestions on using Insulux Glass Block in homes. Owens-Illinois Glass Company, Insulux Division, Toledo, Obio.

IN EVERY HOME THAT NEED INSULUX

Owens-Illinois Glass Company, Insulux Division 15th Floor, Ohio Bldg., Toledo, Ohio

Please send free literature showing practical Insulux ideas that will help

Name.

Address_

City_

State



... Unsurpassed FOR EXTERIORS



Ask your 4-Square dealer about Genuine White Pine for your next job. Look at his stock . . . every piece identified with the 4-Square trade-mark and the words "Genuine White Pine". You know it's "Genuine" when you get 4-Square . . . and so do your customers.

Your local 4-Square lumber dealer will supply you with an interesting Genuine White Pine booklet for your home prospect.

For the modest home or for the mansion, Genuine White Pine is the ideal wood.

The time-tested record of this superior wood for resisting the ravages of the elements under most severe conditions, is worth remembering when you select your lumber for exteriors.

When you point out the extra value of Genuine White Pine to your customers . . . and tell them why you use it, you build confidence which builds sales.

Tell your trade about the long life of White Pine, tell them about its resistance to shrinkage and twisting... tell them about its extra insulating value... tell them how it holds paint. Show them why it's true economy to use White Pine.

From your own point of view, Genuine White Pine is a beautiful wood to work with. It's easy to saw and nail. It resists splitting and stays put . . . and when the job is done, you can point to it with genuine pride.



WEYERHAEUSER SALES COMPANY

SAINT PAUL . MINNESOTA

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THIS 30-SECOND EXPERIMENT WILL GIVE YOU THE KEY TO REAL SATISFACTION IN DOUBLE-HUNG WINDOWS



1. String a cord through a pulley. From each end suspend a five-pound weight. Move the weights up and down. Wherever you stop, the weights stay there. This is true counterbalancing, the time-proved method for supporting double-hung windows.



2. Suspend a five-pound weight from a Pullman No. 5 Balance. Move the weight up and down. Wherever you stop, the weight stays there. This demonstrates the true balancing action of the Pullman Balance in supporting without friction an easy-moving sash.



3. Suspend the five-pound weight from any of the "sash-holders" on the market. The weight will seek a level, will not stay in any other position. Windows using such a device are not balanced, but depend on friction and friction adjustments for support.

• What makes real satisfaction in a double-hung window? The thing which satisfies you best is that which satisfies your customer, the home owner. And aren't these the things looked for: I. A window that operates smoothly and easily; that stays open or shut at any position; that never needs adjustment or attention; 2. A window actually weather-tight without possibility of leakage of cold air or dust; 3. Narrow mullions and trim; 4. A window that won't go wrong during the life of the building?

Windows built with Pullman Sash Balances are balanced—balanced as truly as though they were supported by a cord and weight exactly matched to the window. Yet they eliminate open weight boxes, leaky openings. You insulate right up to the plank frame. Every Pullman balance goes out with a written lifetime guarantee.

Millwork manufacturers in increasing numbers are offering economical, efficient window units Pullman-balanced. Ask your millwork dealer to place a full-size Pullman window unit on display, so you can bring your customer in for a demonstration that shows the difference.

Pullman Balances are time-proved by a record of 54 years of service in schools, bospitals, office and public buildings. Guaranteed Balances built to the same design and workmanship standards are available to millwork manufacturers for use in window units for low-cost houses.



SHOW HOME OWNERS WHY
A PULLMAN-BALANCED
UNIT GIVES THEM
EVERYTHING THEY WANT IN
DOUBLE-HUNG WINDOWS

A demonstration unit of a Pullman-balanced window shows home builders what they're getting, why it will give best performance and service . . . wins for you their confidence and respect. Every dealer should have a demonstration unit permanently on display. Every prospective home-builder should be shown.





NOT JUST "WINDOW GLASS"

There are varying degrees of quality in window glass, as in almost everything else. That's why the name "Pennvernon" has come to mean so much. It stands for uniformly high quality in window glass. It assures a freedom from distorting defects rare in sheet glass making. It identifies a glass that gives good vision, that is bright and reflective of surface on both sides of the sheet. And it marks a glass which is nationally known and nationally available through our many branches and thousands of dealers. Pittsburgh Plate Glass Company, Grant Bldg., Pittsburgh, Pa.

PENNVERNON WINDOW GLASS PITTSBURGH PLATE GLASS COMPANY

"PITTSBURGH" stands for Quality Glass and Paint





What Can YOU do in a KITCHEN?

• You don't have to *cook* to build up a reputation as a kitchen specialist! Use the Curtis Kitchen Planning Service and be a kitchen authority!

Here are 4 big points that will help put kitchen profits in your pockets—points that will help sell houses and remodeling jobs—and get ready-to-buy prospects for you the year 'round.

- 1. Show prospects how they can use the Curtis Kitchen Planning Service. Show them that the satisfaction of nearly 60,000 housewives stands behind it.
- 2. Show "Mrs. America" how she can choose her kitchen color scheme freely—have walls, ceilings, equipment and cabinets match or harmonize. (An outstanding Curtis feature.)
- **3.** Demonstrate how well-designed Curtis Sectional Kitchen Cabinets are durable, *trouble-free* cabinets. Doors and drawers *work*—they are constructed like fine furniture.
- 4. No other kitchen service offers so much. The quality of Curtis cabinets is worth what it costs—always reasonable.

Have your Curtis Dealer tell you about Curtis Kitchens and other Curtis Woodwork. See how to be a kitchen specialist—at a profit. You can finance kitchens through FHA if desired.

Mail the coupon for our free kitchen planning book. If you live in Canada, write to W. C. Edwards & Co., Ltd., 991 Somerset Street, West, Ottawa, Canada.

CURTIS WOODWORK IS SOLD BY RELIABLE DEALERS EVERYWHERE



CURTIS MAKES A COMPLETE LINE OF STOCK ARCHITECTURAL WOODWORK 75 YEARS OF DEPENDABILITY IS BEHIND THIS TRADEMARK

Curtis Companies Serv Dept. AB-4K Curtis Bld Tell me about Curtis your free book.	g., Clinto	n, Iowa	and	send	m
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Ruberoid brings you an amazing new shingle

TIMBERGRAI

.... a rugged, revolutionary, asphalt shingle with charming, two-tone colors and deep shadow lines!



No asphalt shingle in building history has received greater or more widespread acclaim than TIMBERGRAIN!

Wherever this amazing new Ruberoid product has been seenits beauty has proved a sensation!

And it is outstandingly beautiful! Timbergrain's two-tone colorful surfacing is rough and rugged. The extra thick butts are further accentuated by deep black built-in shadow lines-providing a roof of unusual character, massiveness and beauty. This extra thickness also gives greater strength, more weather protection, more safety.

For new homes-for homes that you remodel or re-roof, show your clients Timbergrain. Built in this asphalt shingle is not only outward beauty, but inward long life and durability. Timbergrain is Time-Honored Ruberoid quality through and through.

Be sure to see this style leader, Timbergrain. Write for colorful folder and complete information. Address Dept. AB-4. The Ruberoid Co., 500 Fifth Avenue, New York, N. Y.

Features!

Time Honored Ruberoid Quality Rough Rugged Built-up Surfacina **Charming Two-Tone Colors** Deep Black Built-in Shadow Lines Extra Heavy Thick Butts Extra Strength and Weather Protection

SPECIFICATIONS:

Size each Strip .	. 12" x 36"
Av. approx. wgt. per s	sq 250 lbs.
Strips per square .	80
Bundles per square	
Exposure	5"
Headlap	2"

Available in GREENTONE, REDWOOD, BLUETONE and SLATETONE BLENDS

ion

6"

b5. 80

5" 2" ONE Built in 4



Speed and Power-with EASY HANDLING-that is what counts in a day's work! And SPEEDMATIC is the one saw that has this all-important combination. Its light weight and perfect balance give you a saw usable in any position without tiring! The steadiness of its extra-wide shoe, the natural position of its handle, avoid arm tension and wrist cramping. Result-hour after hour of high-speed, tireless cutting. And SPEEDMATIC power itself never "gets tired" -because SPEEDMATIC helical gears transmit power with great-

See this time and effort saving saw work right on your own job, without obligation. Just call your local Porter-Cable representa-tive (see phone book). Also write us for a FREE copy of "Newest

The Porter-Cable easy-slide, non-sag, ball bearing Radial Arm is a sure way to get double service out of your SPEEDMATIC saw. A big time-saver on duplicate cutting. Set it up in any part of the lot or building. Readily demountable when you need the SPEEDMATIC Saw for hand use.

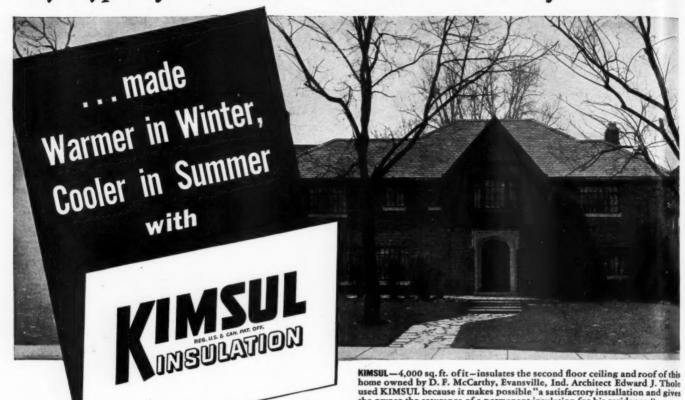


PORTER-CABLE MACHINE COMPANY

1721-4 N. SALINA ST., SYRACUSE, N. Y.

Representatives in principal cities in U.S.A.

Any Type of Home Can Be Built in "Comfort Street"



• The desire for comfort is universal. That is why "Comfort Street" has a site for the modest bungalow as well as the stately mansion. "Comfort Street", you see, is any street where homes are insulated with KIMSUL*. Whenever cost is an important factor, it pays to remember these exclusive advantages. First, the KIMSUL price per square foot is low. In addition, KIMSUL is one of the easiest and quickest insulations to install . . . saves time and man-power. Delivered compressed, KIMSUL further reduces costs by decreasing storage, handling, and shipping charges.

KIMSUL meets your most exacting requirements of efficiency and safety. KIMSUL conductivity is only .27 B. t. u./hr./sq. ft./°F./inch (Peebles). KIMSUL is moisture-resistant, non-burning, and lasting. Once in place, KIMSUL remains at proper density and does not settle. Specify KIMSUL for all your homes in all price ranges. Mail coupon and discover how much more KIMSUL does for the money.

* Rea. U. S. and Can. Pat. Off



KIMSUL Quickly, Easily Installed
Usually a one-man job.
KIMSUL fits standard stud
spacing, can be easily cut for
marrow spacing, corners, etc.



KIMSUL Flexibility Solves Problems KIMSUL comes compressed, is expanded when installed. Can be placed behind electrical outlets and pipes.



KIMSUL Does Not Settle
Rows of strong stitching keep
the expanded KIMSUL
blanket at proper density.
KIMSUL stays "put".

DON'T JUDGE INSULATION'S EFFICIENCY BY ITS THICKNESS

the assurance of a permanent insulation for his residence.

Heat Loss Stopped in Walls

Maximum heat loss stopped with insulation.

Heat loss stopped by Standard (Approx. 1 in. thick) KIMSUL.

KIMSUL is available in three thicknesses: Commercial (nominally ½ in. thick), Standard (nominally 1 in.), and Double Thick (nominally 2 in.). Standard KIMSUL stops the greatest proportion of heat losses in winter and of heat infiltration in summer.

In a normal frame wall, Standard KIMSUL stops 54% of the heat which would normally be lost through an uninsulated wall. Double Thick KIMSUL stops 65% of the heat loss. Wall-thick insulation stops 73%.

The first inch of insulation does the most work. Taking the maximum heat stoppage through walls as 100%, it is readily calculated that Standard KIMSUL stops 74% of all the heat that can be stopped with any insulation.

GOING TO NEW YORK? We invite you to see KIMSUL at the Architects' Permanent Exhibit, Architects' Samples Corpor arion, Park Avenue and Forrieth Street

tie	on, Park Avenue and Fortieth Street.
	KIMBERLY-CLARK CORPORATION (Building Insulation Division) ABB-4 Established 1872 Neenah, Wisconsin
	□ Please send a representative
	□ Please send free book, "Guide to Efficient Insulation"
	Name
	Address
	CityState



The HOTPOINT ELECTRIC KITCHEN As A Powerful Sales Aid!



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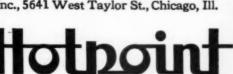
usulation

HOTPOINT ELECTRIC RANGE with new Calrod Units provides MEASURED HEAT cooking. Starts faster, cooks more economically, clean, safe, durable, dependable. Many other great features.



AUTOMATIC HOTPOINT ELECTRASINK banishes dishpan and messy garbage pail. Kitchen Waste Exit flushes food waste away quickly. Automatic dishwasher saves hands by washing dishes at the press of a button. WHEN prospects step into the kitchen of one of your homes, what do they see—equipment that is destined to be outmoded in a few years?—or all-electric kitchens that will enhance the value of the property and save time, steps and labor for years to come?

A good way to sell prospects is to show them modern all-electric kitchen units with Hotpoint Range, Refrigerator, Water Heater, Cabinets, and Automatic Electric Dishwasher or Electrasink. Scores of leading realtors say that a truly modern Electric Kitchen is the first thing to attract a woman's eye—the surest way to cinch a sale—the logical way to get a better price. Hotpoint Kitchens are inexpensive; easy to install. We'll gladly cooperate with architects, contractors, and builders on planning. Edison General Electric Appliance Co., Inc., 5641 West Taylor St., Chicago, Ill.



REFRIGERATORS • RANGES • WATER HEATERS • WASHERS AND BRONERS • CLOTHES DRYERS • AUTOMATIC DISH-WASHERS • ELECTRASINK • STEEL KITCHEN CABINETS



HOTPOINT REFRIGERATOR brings advanced features of electric refrigeration such as: 7 Food Storage Zones, New Butter Conditioner, Measured Humidity, and scores of other advantages.



HOTPOINT WATER HEATER can be installed anywhere; closet, kitchen or basement. Provides 24 hour hot water service for a few pennies a day. Clean because it's flameless. Completely automatic, dependable and safe.

HERE'S AN EASY TO WORK WALLBOARD OF ASBESTOS - CEMENT



WALLBOARD Builders amazed- NEW FIRE RESISTANT BOARD OF ASBESTOS-CEMENT—a Goy to work!

THIS sensational new Careystone Wallboard has workable qualities which completely overcome the usual objections to this type of board. It can be bent, sawed, cut, nailed and whittled. Rot-proof, rodent-proof, not affected or attacked by termites.

CAREYSTONE Wallboard is recommended for all purposes where an unfinished board ordinarily is used. Made of asbestos and cement, it is an effective firestop for walls and ceilings. Desirable for kitchens and bathrooms, as it may be painted and repainted, or papered, whenever desired.

Careystone WALLBOARD will save you money in time and labor; add extra fire-safety to your buildings; help you make sales. Write today for full detailsaddress Department 10.

TRY TO BURN IT



WHITTLE IT

NAIL IT

Manufactured in sheets 48" x 48" and 48" x 96" and in thicknesses 3/16", 1/4" and 3/8". Also available scored in 4" x 4" squares to resemble tile.

THE PHILIP CAREY COMPANY . Lockland, Cincinnati, Ohio Dependable Products Since 1873

IN CANADA: THE PHILIP CAREY COMPANY, LTD. Office and Factory: LENNOXVILLE, P. Q.

NT

Ohio

It pays to give a bathroom the

"GLAMOR OF GLASS"



YOU DON'T HAVE TO SPEND MUCH EXTRA to give the bathrooms in the homes you build the "glamor of glass." A Carrara wainscot like this is comparatively inexpensive... but it is a tremendous help in selling.

BATHROOMS are among the most powerful influencing factors in selling or renting homes. That's why, when you're trying to sell the houses you build, it pays to show prospects bathrooms made beautiful with Carrara Glass walls or wainscots.

Carrara makes an immediate and strong appeal...especially to women. The soft, rich color of Carrara walls, their reflective, polished surfaces which make the room seem bigger, the

impression of luxury and "glamor" they create, are hard for prospects to

And when you tell them that Carrara stays clean with nothing but an occasional wiping with a damp cloth . . . that it won't ever check, craze, stain, fade or absorb odors . . . and that it will be just as good-looking fifteen years from now as it is today . . . the chances are, you've gone a long way toward making a sale!

Use Carrara in the homes you build. For bathroom and kitchen walls, sill covers, shelves, powder rooms. You'll find its slight extra cost a good investment . . . for it helps to make prospects say "yes." Send the coupon for free literature—today.

"PITTSBURGH" stands for Quality Glass and Paint

CARRARA

The modern Structural Glass

PITTSBURGH PLATE GLASS COMPANY

2102-1 Grant Bld	lass Company g., Pittsburgh, Ps.
Please send me, wo on the use of Carr	rithout obligation, your free literature ara Structural Glass in the home.
Name	
Address	***************************************
City	State

IRON and STEEL SHOULD BE BONDERIZED

It is easy to write "Bonderized" into the specifications for steel building equipment, but rust is hard to explain away when the owner complains about it.

It is always more satisfactory to everyone concerned if Steel Windows, Air Conditioning Equipment, Radiator Covers, Bath Room Cabinets, and other steel units are Bonderized before finishing. Bonderizing holds the paint, and the effects of moisture and rust are defeated.

Bonderizing has been protecting America's finest products for many years. It is accepted by many industries as one of the most effective finishing methods. It saves refinishing costs and is a positive economy for the builder.

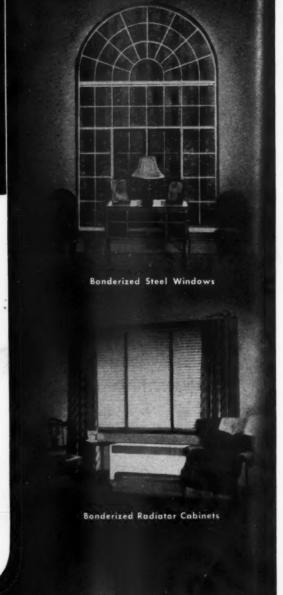
PARKER RUST PROOF COMPANY

2167 E. Milwaukee Avenue, Detroit, Michigan





SEND FOR THIS BOOK:
It gives you the information you want
about Parker Processes, and tells bow
they are serving the
building industry by
protecting iron and
steel building matevials from east



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Good Construction Calls For Fireproof Shingles



...And Three Butts on Every Door



VISIBLE MARK OF GOOD CONSTRUCTION

Few prospects like to climb ladders, so your prospective buyer must take your word on the use of fireproof shingles. They are like so many other out-of-sight elements of good construction.

There is one visible mark of good construction that is easy for all to see and appreciate. It is Triple Hinging of doors. The use of the third butt will prevent warping, hold the edge of the door in alignment, keep latch and lock clicking to a perfect fit every time. And remember, thin doors warp much easier than thick ones—good construction calls for three butts on every door. It can easily cost you more to repair a warped door later than to put three butts on every door in the house. Be wise—build all your homes with this visible mark of good construction, Triple Hinging. The Stanley Works, New Britain, Connecticut.



EXCLUSIVE Stanley Non-Rising Pin



A split ring fitted to the pin automatically snaps into place to keep pin from working up. Just push it down – and it's down to stay. It's simple – it works every time. Be sure to get Stanley Butts for this exclusive feature. Send for Stanley Catalog No. 61 showing the complete line.

STANLEY

Trade Mar

REMEMBER...THREE BUTTS TO A DOOR



Your old friend
DUTCH BOY PASTE LEAD
has been Triple-Improved!

Yes, Mr. Builder, your old standby, Dutch Boy Paste White Lead is now better than ever. Thanks to National Lead research it has actually been *Triple-Improved!* Now—on top of its acknowledged durability, its reputation-building beauty, its proven economy—there are 3 mighty important new reasons for using Dutch Boy:

- 1. First, it has been made even whiter! That means clearer, more sparkling whites; cleaner, crisper tints; brighter, more saleable homes . . .
- 2. Second, Dutch Boy has been given improved body! Today it actually makes a beavier paint a sturdier home guard than ever before . . .
- 3. Third, Dutch Boy now has increased hiding power. It not only gives a more solid-looking job but covers more surface per gallon.

Remember its many other well known advantages: easy mixing and spreading, adaptability to varying jobs, freedom from cracking and scaling—and you'll agree, Mr. Builder, that they don't make 'em any finer than today's Dutch Boy Paste White Lead.

DUTCH BOY PURE WHITE LEAD PAINT

Comes Ready - to - Brush!

Yessir, now you can get Dutch Boy in ready-to-use form. It's pure white lead, all ready to spread! Clioned sales appeal and economy of white lead plus ready-to-brush convenience.

2 COAT JOB—on New or Old Wood!
FORMS—Exterior Primer and Outside White!
Who want extra-dependable, 2-coat painting. Its 2
Pure white lead paints)—are designed especially for content of the content of t

You've never bought an exterior primer that was easier to apply. You've never known a 2-coat comput a big "O.K." on its leveling qualities, white

Extra Quality at Regular Quality Price!

With all these big advantages, Dutch Boy Pure White Lead Paint doesn't cost any more per gallon any desired quantity paint. And you can get it in 20-gallon drums.

50, MR. BUILDER, whichever you use, the new Dutch Boy Paint or the Triple-Improved Dutch Boy Paste Lead, remember-you're money ahead when you paint with White Lead.

DUTCH BOY PURE WHITE LEAD



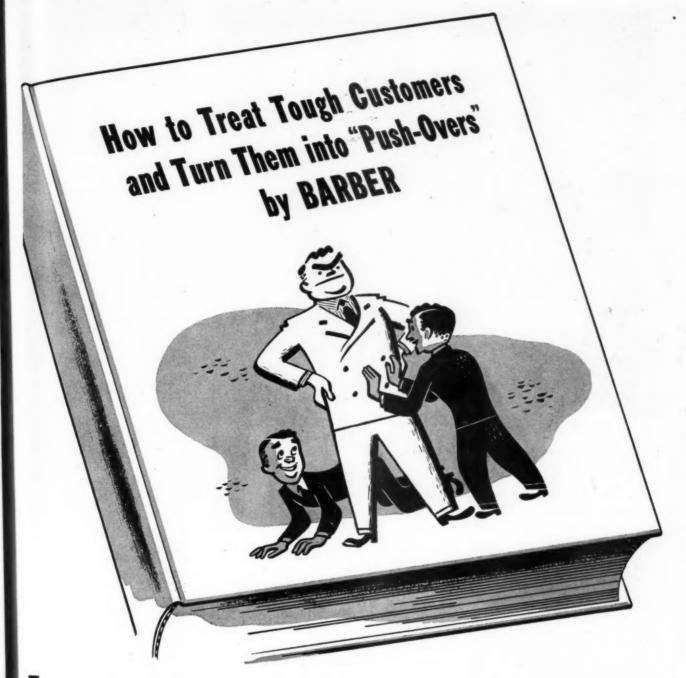
NATIONAL LEAD COMPANY 111 Broadway, New York; 116 Oak Street, Buffalo; 900 West 18th Street, Chicago; 669 Freeman Avenue Cincinnat; 123 West Third St., Cleveland; 722 Ches nut Street, St. Losic 2240 24th Street, San Francisco; National Bando Lead Co., 800 Albany St., Boston; National Lead&Ol. Co. of Penna., 1376 River Ave., Pittaburgh, Jahri. Lewis & Bros. Co., Widener Bidg., Philadephia

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THE public's getting choosier every day . . . harder to please . . . harder to sell. But don't forget this-if the outside of a house is so attractive that prospects can't resist seeing what's inside, half the battle's over.

 That's one reason why so many builders are buying Barber Roofs this year. Because Barber Roofings really "have something" in the way of looks. The new Barber colors are as eye-appealing as a rainbow. They're the kind of colors that people want to see again and again. They make the roof a "beauty spot" instead of a "necessary evil."

 And Barber Roofings give you another hard-hitting sales weapon - PROTECTION! They're the only roofings using the native lake asphalt from Trinidad in the Caribbean — a remarkable natural weatherproofer.

When you talk about a Barber Roof, you have an added talking point that helps turn prospects into customers.

· Find out about these Barber Roofings from your near-by Barber dealer. Look for his name in your local classified telephone directory. Or write direct to Barber Asphalt Corporation, Barber, New Jersey.



MEANS A GOOD ROOF!

SHINGLES

SIDINGS

ROLL ROOFINGS

BUILT-UP ROOFINGS



H AVE you ever gone back to see the kitchens you put in ten years ago? Were they still bright and gay? Or were they stained and scarred — old before their time?

You said to yourself, "This can't be the beautiful kitchen I designed." But it is! Kitchen work surfaces take a beating that only the best of materials can survive.

If you want kitchens that will stay silver-bright year after year with a mini-

mum of care—plan them with U·S·S Stainless Steel. Stainless won't rust. Fruit acids won't stain it. Strong scouring powders and soaps merely make it look better. Stainless doesn't gouge, chip or crack. It's the nearest approach to the perfect metal.

Any good sheet metal worker can fabricate sinks and work surfaces with U·S·S Stainless Steel. Get an estimate on your next job and insist on U·S·S Stainless.



Longer-lasting Roofing
U·S·S Copper Steel terne roofing looks
good — wears better. For rust-resisting
gutters and down-spouts use U·S·S
Copper Steel.



Now, Ready-Made Steel Closets Complete with shelf, hooks and rod, in one unit ready to slip into place. No cracks or crevices. No plaster.



Steel Area Walls for More Light Made from U·S·S Galvanized Copper Steel, these new walls reduce installation costs, look trim, resist rust. Steel coal doors won't break.



Be Sure Your Heating Plant is Steel
A firebox of U.S.S Copper Steel is
smoke-tight, resists corrosion. Air dists
of U.S.S Galvanized Steel last as lost
as the house.

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CARNEGIE-ILLINOIS STEEL CORPORATION, Pittsburgh and Chicago
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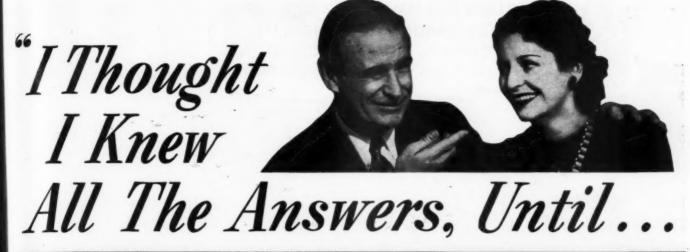
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SPECIFY U.S.S

These initials appearint of the steel products going into your jobs advertise the hith quality of your work.

UNITED STATES STEEL



my wife gave me the biggest money-making tip in years!"



I Was Trying To Figure a Way To More My Homes Faster. Guess I was in the "dumps" that day when Marg came home—excited as a kid! "Honey", she said, "I've found just what you want...



"Helen Has A New Kind Of Automatic Heat in her new home—a Cole-man Floor Furnace! It doesn't have air ducts, but it circulates heat all over the house! And it costs so little!"



3 Well, That's Just What I Needed All Right! My prospects go big for Coleman's automatic, circulating warm air! Coleman's low price gives me more profit on every sale! They're real money-makers!

Coleman Gives You What Your Prospects Want! ... Fully Automatic, Circulating Furnace Heat at a low price that makes more money for you!

Here's a money-making trend that's boosting profits on every house sale for thousands of builders all over America! It's the swing to automatic, circulating heat-with famous, low-cost Coleman Floor Furnaces!

Completely installed with thermostat controls, a Coleman costs about 1/2 the price of an average basement furnace! That means more profit for you right from

Better yet, it gives you an edge over competition—furnishes you with fast-selling features that every prospect wants today!...

Guaranteed warm floors, uniform temperatures, health-conditioned air, and low fuel bills!

You have a Coleman size for every type of installation!... And a choice of furnaces—gas. where available, or oil!

See for yourself why builders, coast-to-coast, tell us, "We've been selling houses like hot cakes since we standardized on Coleman!" Get full facts now!

FREE! Write us today on your letterhead for free Builder's Catalog and installation data; also name of nearest distributor!

Address Dept. AB-12.

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America's Largest Selling **FLOOR FURNACES** For Gas & For Oil

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appearing entries going into ties the high work.

FFD-12



Here's How You Can Be The Top Good Will Builder Of Your Community

Give your clients and customers something to remember you by! Install General Electric Kitchens—they're just about tops in good will building! The streamlined beauty and utility of G-E Steel Kitchen Cabinets and the G-E Electric Sink will be a source of owner pride and satisfaction for years

to come. And you'll reap the benefits of word-of-mouth advertising!

Your clients pay no premium of price for General Electric Kitchen equipment. G-E All-Steel Cabinets are *competitively priced* and are easy and inexpensive to install. Their many convenience features have real and *lasting* appeal. Why not get all the facts?

SHE'LL THANK YOU EVERY DAY FOR YEARS



Here's one of the best "salesmen" you can hire . . . the G-E Electric Sink that washes dishes and disposes of garbage electrically! Make it a feature of your homes and you'll be remembered — and rewarded.

SEND FOR THE NEW G-E CATALOG!

Gives complete information on G-E Cabinets, Electric Sink, and "Packaged" Kitchens for small homes and apartments. Ask your G-E Distributor for a copy or write direct to General Electric Co., Appliance and Merchandise Department S-1184, Bridgeport, Connecticut.



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GENERAL ELECTRIC

MENGEL * FLUSH DOORS

for Even the

SMALLEST HOME!

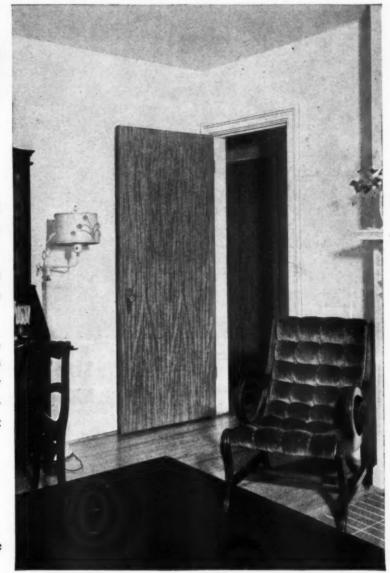
TALK to the average builder or layman and you'll discover that *most people* think flush doors are expensive luxuries, for big homes only.

That used to be true, but it isn't now! And that's an opportunity for smart home-designers to make a big show with little money!

Mengel Flush Doors are the finest, lightest, sturdiest doors on the market today—yet, thanks to immense production, are available at very low prices. Manufactured under the famous Johns-Manville patent, they are backed by the strongest guarantee in the industry:

If any Mengel Flush Door warps in service, and does not straighten out within a reasonable time, it will be replaced free of charge, including the installation cost.

Let us send you all the facts—today. Use the coupon below.





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MENGEL BORD

Here's an extremely fine, resin-bonded, 1/4" hardwood plywood that you can get in several grades, at lower prices than for any comparable plywood on the market. Made in big 4'x8' sheets, with grain running the long way, and with faces of Mahogany, Gum, Walnut, Birch or Oak! Use the coupon!

The	Mengel	Co.,	Incor	porated
Loui	sville K	v		

Gentlemen: Please send me full facts about Mengel Flush Doors, and name of nearest supplier

Also facts about Mengel Bord, as described at left

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Address

City__

_State__

Things sure do move when CHEVROLET TRUCKS go to work



Inspect these

NEW 1941 FEATURES

* TWO NEW VALVE-IN-HEAD ENGINES . . . STANDARD: 174 FOOT-POUNDS OF TORQUE—90 HORSEPOWER . . . "LOAD-MASTER": 192 FOOT-POUNDS OF TORQUE—93 HORSEPOWER* * NEW RECIRCULATING BALL-BEAR-ING STEERING GEAR * NEW, MORE COMFORTABLE DRIVER'S COMPARTMENT.

*Optional on Heavy Duty models at extra cost

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ON NINE LONGER WHEELBASES
. . . A COMPLETE LINE FOR ALL
LINES OF BUSINESS

They have EXTRA horsepower ... EXTRA pulling power . . . EXTRA earning power

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There's a lot of work to be done in this country this year—more material to be moved, and moved fast; more goods to be delivered, and delivered on schedule; more supplies to be hauled, and hauled promptly.

It's a year for heavy duty trucks with extra powerand that makes it a year for Chevrolets, because they are the most powerful trucks in the low-price field.

There are full 90 horsepower and the tremendous pulling power of 174 foot-pounds of torque in Chevrolet's Standard engine. If you need more, there are 93 horsepower and 192 foot-pounds of torque—extraordinary pulling power for extraordinary duty—in the special heavy duty "Load-Master" engine, optional at a small additional charge.

Be ready for peak loads—with the trucks that can carry them.

CHEVROLET MOTOR DIVISION, General Motors Sales Corporation
DETROIT, MICHIGAN

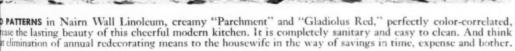
OUT-PULL . . . OUT-VALUE . . . OUT-SELL

MORE "Thinking Twice"

BOUT PERMANENT COLOR FOR WALLS.

Here is a beautiful,
long-wearing material
... practical even for
limited budgets





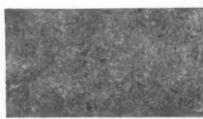


Illustration 1/4 scale.

Nairn Wall Linoleum, "Gladiolus Red," No. 7952.

Nairn Wall Linoleum, "Parchment," No. 7973.

Illustration 1/4 scale.



MANNING distinctive decorative effects for any room, hitects and builders need hesitate no longer about as permanent color for walls because of the price tor. Nairn Wall Linoleum—built to last as long as house itself—is not only beautiful, but moderate in ... entirely feasible even for small residences.

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try this

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ng power y ''Load narge. Available in a wide range of patterns—delicate tels, rich dark tones, mottled and striated designs—im Wall Linoleum will harmonize with every color teme. And its extreme flexibility makes it adaptable my structural design, permitting smartly rounded tests at inside and outside corners and openings.

When installed by Authorized Contractors, Nairn Linoleum is fully guaranteed. Write for 16-page booklet, "Nairn Linoleum for Floors and Walls."

GOLEUM-NAIRN INC., KEARNY, NEW JERSEY

NOTICE HOW this flexible material completely eliminates the necessity for door jambs...contributes a modern "streamlined" effect. The use of Nairn Wall Linoleum on doors need not be limited to new construction. Old, panelled doors may be filled with plywood and covered with this modern wall material.





4-SQUARE ENDLESS LUMBER

Lowers Building Costs—and Produces a Better Building

The principle of end-matching, so successful in flooring, is now equally successful for sheathing, sub-floors, roofs and siding.

4-Square Endless Lumber helps you in many ways. It saves building time because sawing is necessary only at the ends of runs and openings. Trimming to join over framing members is entirely eliminated. It saves nailing because only two nails are required with Endless where four are needed when joints must break on the studs, joists or rafters. You also save material with Endless Lumber. There is no waste. The piece you saw off at the end of one course is used to start another.

In addition to saving time and speeding up jobs, Endless Lumber gives you unusually strong construction. With every piece firmly joined by tongues and grooves on ends and edges, a continuous, solid covering is secured which adds to the rigidity of the frame.

When diagonal application is required for walls and sub-floors, the time saved with Endless is even greater. Rigid joints are formed by the tongues and grooves, thus greatly reducing application time.

This improved 4-Square Endless Lumber is produced in suitable grades for many purposes in Douglas Fir and West Coast Hemlock. It is delivered in ready-to-use bundles which carry the 4-Square label. Endless Lumber is helping many builders to get good, profitable contracts on the basis of better construction, economy and speed in erection. Write for complete catalog and descriptive literature.



Diagonal application is easy with Endless and gives additional strength and rigidity.



Sawing is necessary only at ends of runs and openings.



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(BELOW) CARTER J5 POWER PLANE — takes a satin-smooth cut, thick or paper thin, across $2\frac{1}{2}$ ". Quickly adjustable. Full 1 h.p. motor.

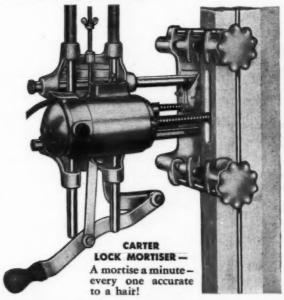
R. L. CARTER DIVISION, THE STANLEY WORKS, 133 Elm Street, New Britain, Conn.

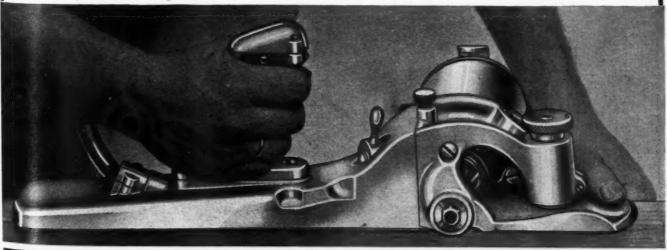
Send me facts on the Carter Money-Making Tools that will help me hang 8 times as many doors per day.

Name

Address

If you erect only 10 houses a year, you can make proportional savings with this Carter equipment! This builder has hung over 100,000 doors on the largest housing job in the U. S. – and his cost for 3 sets of Carter equipment, including purchase, repairs and upkeep has been only 2¢ per door! He has hung as many as 600 doors per day! The coupon above will bring facts on how this equipment can make similar savings for you. Send it today! R. L. Carter Division, The Stanley Works, 133 Elm Street, New Britain, Connecticut.





CARTER MONEY TOOLS

That's the window that helps me deliver MORE HOUSE MONEY

THE ORIGINAL AND GENUINE

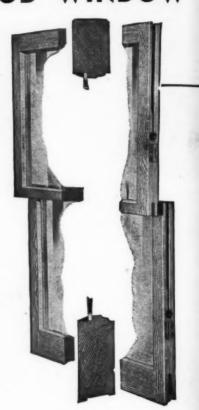
RED-E-FIT ROT-PROOF -REZISTAL-TREATED

WOOD WINDOW



SPECIFY "REZISTAL" TREATED

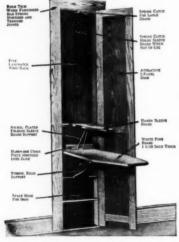
Identified By Above Brand Burned in the edge of each stile.



REZISTAL PREVENTS—absorption of excessive moisture—Protects against wet weather and high humidity — Prevents excessive swelling that causes "sticking" windows — Eliminates undue shrinkage and expansion — Prevents blue stain or black mould from developing — Protects against all types of decay, also Termites.

Painting cost is reduced because the "Rezistal" treat serves as a preliminary priming coat and gives full protection until regular paint coats are applied.

This wood window is made of soft textured kiln dried Western Ponderosa Pine, "Rezistal" treated—Guaranteed for 25 years against rot & decay



Ironing Board HM-1134



FOR ARCHITECTURAL BEAUTY, choose "Woodwork of Merit," the Nation's finest Sash, Doors, Frames, Screens, Cabinets, Trim, etc. Neat, convenient China Cases. "Modern Mode" Kitchen Cabinets. Huttig Doors are unsurpassed for beauty and construction. Illustration shows a popular Colonial front door. See your Dealer or write today for descriptive literature.

HUTTIG MFG. COMPANY

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Door HM-600

941.

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IN EVERY SALES OFFICE

In each of Bethlehem's sales offices there are one or more men who have been intimately associated with every kind of reinforced concrete construction. These men are technically trained experts on reinforcing steel. With a full understanding of your problems they can give the complete and intelligent service you need.

To further this reinforcing steel service Bethlehem maintains 15 warehouses in key industrial areas; the one nearest your job can ship your steel economically. In addition, each Bethlehem warehouse has a shop staffed and equipped to cut, bend and fabricate the steel according to your specifications.

BETHLEHEM STEEL COMPANY



Use BRUCE STREAMLINE FLOORING Gives Home Owners Many Advantages!



FACTORY-FINISHED! Bruce Streamline Flooring comes finished and waxed—ready for use the instant it's laid. So it saves time, labor. Doesn't hold up the work of other trades. In remodeling jobs there's no mess, smell or waiting for finish to dry.



FLOORS OF LASTING BEAUTY! Everybody loves that smart "shadow pattern" effect of Bruce Streamline Flooring, with its extra wide strips and beveled edges. And the sealed in scratch-resisting surface is so easy to keep clean.



A LIFESAVER FOR BUDGETS! No wonder home owners are thrilled to get a really superior floor—with extra beauty and wear—at no greater cost than ordinary oak flooring finished in the home.



MAKE THIS SCRATCH TEST! Let prospects see the proof of how Streamline's amazing new finish withstands wear that would chip and mar ordinary "surface"finishes. Send for free "scratch test" panel.

● Bruce Streamline Flooring is available in Oak, Maple and Beech. Three sizes ²⁵/₃₂" x 3¹/₄", ¹/₂" x 2¹/₂" and ³/₈" x 2". Laid like ordinary strip flooring. Nationally advertised. Mail coupon for complete information and free "scratch test" panel *today*.



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FLOOR FINISHES • TERMINIX • LUMBER PRODUCTS

FREE OFFER!-MAIL COUPON!

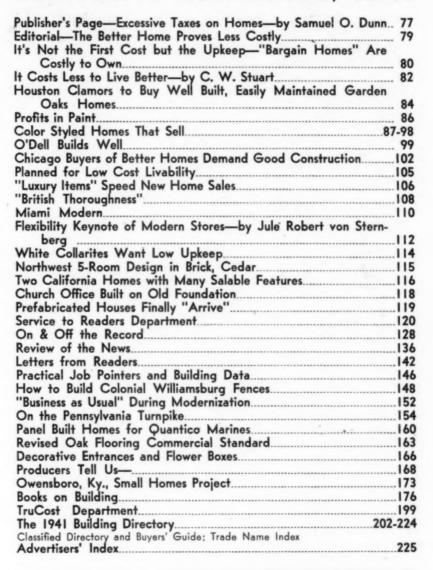
E. L. Bruce Co., 1577 Thomas St., Memphis	, Tenn.
Gentlemen: Please send FREE "scratch test and full details about Bruce Streamline Flo	
Name	
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Add: Man Men

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AMERICAN BUILDER

CONTENTS FOR APRIL, 1941





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63rd Year Vol. 63, No. 4

AMERICAN BUILDER and BUILDING AGE, with which are incorporated National Builder, Permanent Builder and the Builder's Journal, is published on the first day of each month by the

SIMMONS-BOARDMAN PUBLISH-ING CORPORATION, 105 West Adams Street, Chicago, Illinois, New York Office: 30 Church Street

WASHINGTON, D. C. National Press Building SEATTLE, WASH. 1038 Henry Building SAN FRANCISCO, CAL. 550 Montgomery Street LOS ANGELES, CAL. 530 West Sixth Street

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Subscription price in the United States and Possessions and Canada, 1 year, \$2.00, 2 years, \$3.00; foreign countries, 1 year, \$4.00, 2 years, \$7.00. Single copies 25 cents each. Address H. E. McCandless, Circulation Manager, 30 Church Street, New York, N.Y.

Member of the Associated Business Papers (A. B. P.) and of the Audit Bureau of Circulations (A. B. C.) PRINTED IN U.S.A.

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Jake's all set to cut your bair--paint your portrait---or embalm you!



WE knew a fellow once named Jake who could do practically everything. He was a jack-of-all-trades. But somehow Jake never got to be very good at any one thing.

Now, we believe that this is a free country and a man does not have to specialize in any one line unless he wants to. But we've seen it pay.

Take, for instance, the case of the National Gypsum Company. National has specialized in wall and ceiling materials ever since its introduction (in 1925) of the first light-weight super-strength gypsum wallboard. Today as then National sets the quality standards for the entire plaster-board industry.

At the same time National has improved all wall and ceiling materials to the benefit of every factor in building. Plaster and lime quality has been stepped up. National has developed purer sources of raw materials . . . perfected new manufacturing methods . . . devised more efficient systems of construction.

An example is the Gold Bond 2"

solid partition system which has increased rentable floor space by thousands of feet on big housing jobs. Another is the Gold Bond arch bead, a base for plastered arches that is bent on the job to meet any requirement.

Gold Bond is the only manufacturer in the world specializing exclusively in wall and ceiling materials. The result is that today there is a better Gold Bond product for any type of interior whether it be lath and plaster, wallboard, insulation, coldwater paint or sound absorption. Today, when you do business with Gold Bond you are assured of three important things:

- 1. With Gold Bond research always on the job in this one field, you will be first to profit from the newest and the best improvements.
- 2. National's more than 300 representatives can help you select the best materials for any job—and tell you exactly how to use them.
- 3. When Gold Bond materials are used exclusively, one manufacturer is responsible for the result.

Write today for the 1941 Gold Bond Handbook, describing new methods of wall and ceiling construction. Address, National Gypsum Company, Buffalo, N. Y.

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related wall and ceiling products

Producing Units at:

NEW YORK, N.Y. . . . CLARENCE CENTER, N.Y. . . . AKRON, N.Y. . . . PORTSMOUTH, N.H. NATIONAL CITY, MICH. . . . FORT DODGE, IA. . . . MEDICINE LODGE, KAN. . . . ROTAN, TEX. SAVANNAH, GA. . LUCKEY, O. . BELLEFONTE, PA. . YORK, PA. . ORANDA, VA. . SALTVILLE, VA. NILES, O. . MOBILE, ALA. . NEWBURGH, N.Y. . ALEXANDRIA, IND. . DUBUQUE, IA. . DOVER, N.J.

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PUBLISHER'S PAGE

Excessive Taxes on Homes

WHEN local taxing bodies levy unfair and confiscatory taxes on homes and other real estate, they are taking a long step in the program toward state socialism and the public owner hip of what is now private property. The socialist formula is to make private ownership of property unprofitable, then to take it over; and this formula is already in full oper-

ation in the housing field.

It is estimated that the gross annual income of privately owned real estate in the United States is about 7 billion dollars, which includes not only the gross rents actually collected but also the estimated annual rental value of all owner-occupied farms and all owner-occupied properties in the cities. According to an estimate made by the Department of Commerce, local real estate taxes are levied amounting to $4\frac{1}{2}$ billion dollars, or 64 per cent of this total income. The National Real Estate Tax Conference, meeting last spring in Washington, concluded that this situation is "the key-log of our economic jam."

"IT IS our archaic tax system," the Con-ference declared, "which has put the ference declared, "which has put the brakes on progress and which is responsible in no small degree for much of the economic distress in our national life. Land distribution, which is the evidence of growth and progress, has been slowing down. Home ownership has been falling behind population increase, until today only 40 per cent of our citizens own property. We have permitted taxes to be levied on property in a cumulative manner without regard to income or value and without serious effort to shift unjust burdens to other forms of wealth. The economic effects are felt by every person in the community when real estate tax delinquencies mount as they have been doing in virtually every subdivision of every state in the Union. We must pull the keylog of the economic jam if we want to permit a better flow of business by increased building."

Real estate should pay its just and fair proportion of the cost of government, and no more. When taxes are paid on a value that does not exist you are actually liquidating the property. We cannot as a people afford to see the soundest of all values, the yardstick for all values, taxed until it is no longer an asset, defaulting to the municipality. In a democracy, real property ownership is one of the great incentives to thrift. It is one of the privileges accorded us in the past by our form of government. The broad distribution of property ownership constitutes a real safeguard for the preservation of this form of government.

BUT while these unfair taxes have been laid on homes and other real estate, the government has pushed its own program of public housing in competition with private ownership. These publicly owned and subsidized houses are tax-exempt at a time when local governments are short of funds even in spite of high tax rates.

A current survey by the U. S. Savings and Loan League shows that lagging revenues of various governments will be bolstered by some \$34,062,000 annually as a result of the new homes built for private ownership in America this past year. The League's "Taxation Committee," making the report, estimated that the 386,300 single family homes built in the non-farm areas added \$1,362,508,000 to the value of taxable real property last year.

"While the private building industry was preparing this \$34,000,000 worth of oil to pour annually on the troubled waters of local government finance, public housing was stirring up the waters under-neath," said Wendell C. Gates, Battle Creek, Michigan, chairman of the com-"Estimating the taxes which housing built the past two years with public funds and subsidies would have netted to local governments if they had been built for private ownership on the same basis as the tax rate on those which were built privately, we find that tax exemp-tions on public housing projects are costing the cities and counties annually \$5,-500,000. Only about \$250,000 of this was made up last year by the service charges which are so called 'payments in lieu of taxes.'

It's more of the regular socialist doctrine—tax and destroy, until public ownership is the only recourse.

Samuel O. Drun,

SIMMONS-BOARDMAN PUBLISHING CORPORATION: SAMUEL O. DUNN, CHAIRMAN OF THE BOARD; HENRY LEE, PRESIDENT; BERNARD L. JOHNSON, ROBERT H. MORRIS, AND DELBERT W. SMITH, VICE-PRESIDENTS; ROY V. WRIGHT, SECRETARY; E. T. HOWSON, ASSISTANT SECRETARY; JOHN T. DE MOTT, TREASURER; EXECUTIVE AND EDITORIAL OFFICES: 105 WEST ADAMS STREET, CHICAGO; 30 CHURCH STREET, NEW YORK CITY.

24-HOUR CONCRETE SPEEDS GARAGE FLOOR REBUILDING -CUTS TIME IN HALF

'Incor' Keeps 'Em Rolling!



To ACCOMMODATE the increased weight of present-day buses, New York's Fifth Avenue Coach Company recently reconstructed the second and third floors of their East 102nd Street garage—Franklin Concrete Corp., New York, general contractor. Old floors were torn out, and 5 in. of 'Incor' concrete placed on the reinforced concrete arch. Work progressed in sections; 24 hours after the 'Incor' concrete was placed, it was opened to heavy bus service. The contractor had a month to do the job—but he finished it in two weeks, thanks to good planning and 'Incor' 24-hour service strength.

'Incor,'* the first high early strength Portland cement, is service-strong in one-fifth the usual time. That cuts costs all along the line—on forms, curing, overhead. And long-time durability, proved by 13 years' performance, saves money through expense-free service. Write for copy of "Cutting Concrete Costs." Lone Star Cement Corporation, Room 2232, 342 Madison Avenue, New York.

*Reg. U. S. Pat. Off.

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AMERICAN BUILDER

AND BUILDING AGE

The Better Home Proves Less Costly

THE HIGH cost of poor construction is well known to experienced builders. If a building fails to stand up and give service for its reasonable life, extra expenses for repairs and maintenance have to be incurred; what was saved in first-cost by skimping quality is made up, and more, in later up-keep costs. By short-sighted buying, the property owner finally has all the expense, but neither the service nor the satisfaction, of the better home which just a little added percentage for quality would have secured.

These are facts that building industry men have long understood; but the average home buyer, inexperienced in construction matters as he usually is, continues to court disappointment and excessive operating costs by shopping around for "bargains," priced low.

But today the fallacy of this drive for "cheapness" is being exposed. Long-term financing for homes, with all costs amortized and paid monthly like rent, is revealing now, for the first time in *popular terms*, the actual facts of the economy of quality.

Three Factors in Total Cost

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Take, for example, the typical modest home of today that is being paid for under the popular 15-, 20- or 25-year mortgage plan of the FHA and Savings & Loan type. The purchaser is not so much interested in the total first-cost of the home (the principal sum) as he is in the amount of the monthly payment. And he knows that his monthly cost for home ownership and home occupancy is made up of three parts: (1) his monthly payment on the mortgage contract (interest, principal, insurance, tax); (2) his average cost for repairs and up-keep; and (3) his average cost for heat, light and household service.

The sum of these three factors is the true cost of his home, and it very often is discovered that, after a very few years, increases in item (2), repairs and replacements due to shoddy construction and skimped equipment, are more than enough to outweigh the savings made in the mortgage payments, item (1).

Also, in regard to item (3), fuel and lighting cost and expense for necessary household help, the "cheap" house is usually found to be really the extravagant one, wasting fuel, wasting electricity and demanding excessive expense for cleaning and other household service.

On a 20-year mortgage payoff under present FHA regulations \$1,000 added to the first-cost of a house means only \$6.33 added to the monthly payments, item (1). Often that thousand dollars is more than the difference between a "cheap," skimped house and its dupli-

cate strongly built, well finished, thoroughly insulated and supplied with lasting equipment. Yet an average of \$6.33 monthly can very easily be spent repairing cracks, stopping leaks and replacing short-lived equipment—which turned out to be no "bargain" after all.

Aim for Low Occupancy Costs

Item (3), average monthly costs for fuel, light and service, also deserves more consideration than many home buyers and builders usually give to it. Insulation in walls and roof, storm sash, double glazing, weather-strips—all pay for themselves in just a few years in reduced fuel bills; the added comfort both winter and summer is *free*, with greater family health and less medical expense as an extra dividend.

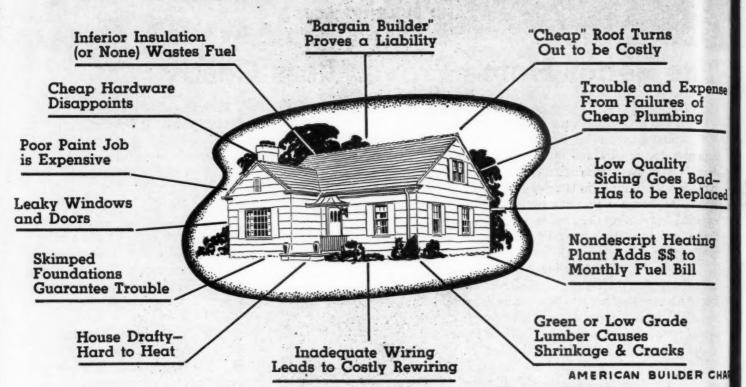
In the matter of lighting and labor-saving home power, real life-time economy favors an adequate wiring installation; no skimping is justified here. Wire that is heavy enough, plenty of circuits to prevent overloading, convenient outlets in every room, high safety standards maintained—these all can be had of good quality for a small percentage, and pay dividends over the entire life of the dwelling, reducing costs and increasing livability. The modern, small, well-planned, electrical home is a true servantless home—and \$10 per week saved on "help" amortizes in 20 years an extra investment for labor-saving comfort of \$6,846.

Quality Pays on Both Large and Small Homes

The "Low Cost of Good Construction" when figured on a long-time basis is just as real for the owner who pays all cash or finances on a small, short-term mortgage as it is for the owner who agrees to make monthly payments for 20 years. The advantages of quality and freedom from excessive repair and maintenance expense mean just as much to the one as to the other. But the owner who is paying off monthly perhaps sees the money advantage more clearly. He is working to a budget and he finds that the all-important thing for him is not to have his budget upset as he goes along by unexpected failures of the house or its equipment, leading to excessive repair and replacement costs.

The quality home gives him this assurance. The small extra premium added to the first-cost for something better than the cheapest turns out to be the best investment in the long run. The better home actually proves less costly when the consistently lower expenses of maintenance and of occupancy are figured in.

Only the RICH Can Afford This CHEAP HOUSE



First Cost Was Less-But MONTHLY OWNERSHIP Cost is GREATE

It's Not the First Cost but the UPKEEP-

Lasting quality assures low yearly-cost— It pays to deal with efficient builders who use good products, skilled workmen.

WHY is it that so many people, when they come to build or buy a house will cut, scrape, bargain and go to ridiculous extremes to beat down the price, or try to get something for nothing? If they were buying a suit they would willingly pay \$40 for a quality garment rather than \$16.50 to a peddler, although the two suits, while new, might look very much alike.

Houses look a lot alike, too, especially when they are new. The inner construction is not apparent to the casual observer or the inexperienced customer. Hidden values, which experienced building men know to be so important in the long life of a building, may or may not be present. If they are present, the buyer is very largely relieved of future costs for repairs and maintenance; if absent—if the job has been skimped—repairs and upkeep costs constantly grow larger, often endangering the buyer's entire financing program.

In the American Builder pictographs, illustrated above,

In the American Builder pictographs, illustrated above, are listed some of the more important hidden-value details in home building and home equipment. The "cheap"

house in construction, finish and operating equipment is contrasted with a "quality" house of the same design. Only a rich man—that is to say, one who can afford to be careless of expenses—can afford to own and operate this "cheap" house. The "quality home," on the other hand, with lasting service built-in and provided with trouble-free equipment provides a safe investment for a poor man—one who has to control his expenses and work to a budget. For such a one—and practically everyone is in this class—the freedom from unexpected and unbudgeted repair bills and from excessive home operating costs more than makes up for the slightly larger monthly mortgage payoff payments occasioned by the better construction and better home equipment.

The items listed in the pictograph of the "cheap" house are well known to, and avoided by, most building industry men. They know the long-time value of good construction and equipment, and the shortsightedness and the disappointments inherent in the skimped job. The items listed in the "quality home" pictograph are, for the most part, simply the affirmative side of the negative items that characterize the cheap job.

Good lumber, good brick and stone work, good concrete, durable roofings, non-corroding sheet metal work, quality windows well fitted, storm sash, permanent weatherstripping, long-life paint, trouble-free plumbing, an

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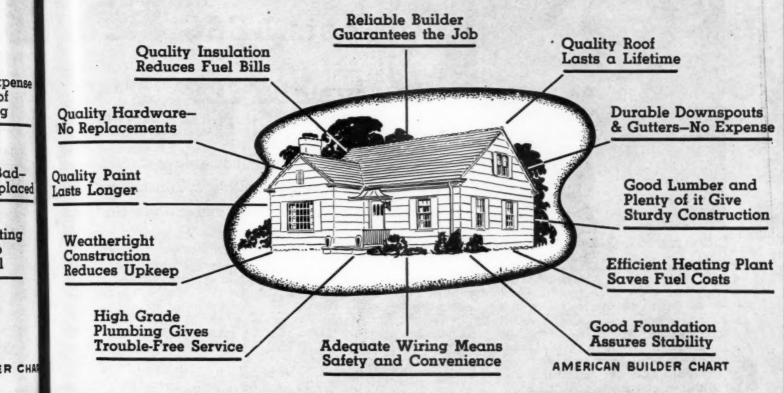
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Even a POOR MAN Can Afford This QUALITY HOME



Costs LESS to Own Because it is WELL BUILT

-"Bargain Homes" Are COSTLY to Own

adequate heating plant properly installed, and safe electric wiring with safety panel, switches and outlets sufficient for today's expanding electric needs—all are marks of "quality" which sufficiently pay for themselves over years of service as compared with the first cost of the shoddy stuff that all too often is thought proper for the "cheap home," but proves so costly in the long run.

Take just one item as a specific example to show what a small extra investment at the start will mean in cutting monthly operating costs throughout the entire life of the house—not to mention comfort and health for the occupants. We refer to insulation installed in side walls and under the roof to keep down the cold weather fuel bills and to promote comfort and health by keeping the heat out in hot weather. A leading manufacturer of insulating materials reports the following experience in connection with a one-story home in the Chicago area. This was a house of customary frame construction, 2 x 4 studs, 1/8" pine sheathing, clap boards, lath and plaster. No special insulating material was included either in the side walls or overhead. When first erected, 12.1 tons of coal per season were required to heat this uninsulated house. Later, two-inch thick insulation was added throughout the side walls and above all ceilings. As a result, the fuel required to heat this house was cut down to 6.4 tons, a saving of fuel cost of 47.1 per cent. This

saving in annual fuel cost completely paid, within a few years, the extra cost of the insulation and then continued to work for the owner to reduce his fixed monthly budget, set up for the combined purpose of retiring the mortgage and operating the home.

As illustrated in these American Builder pictographs, these two homes look a lot alike when new; and, unfortunately, the builders of houses must also look alike to many prospective buyers; for frequently they fail to distinguish between the man who is prepared to deliver a quality job and the man who will cut and chisel all along the line, just as much as the buyer forces him to.

Why is it that some people will try to get more in a house than their money can possibly buy—even to the extent of turning to a fourth-rate contractor or of dispensing with a contractor entirely and trying to do the job themselves?

(Continued to page 178)

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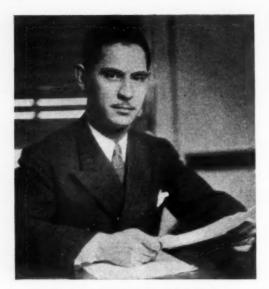
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C. W. STUART, manager, G-E Home Bureau.

It Costs LESS to Live BETTER

-in a quality-equipped home, says C. W. Stuart, describing how low monthly operating costs are more important to home owner than first cost

MAN'S home is his castle, and many men who do not enjoy a kingly income have discovered that fact to their sorrow. When they first set about buying or building a house to shelter themselves and their families, the emphasis may have been on home, but after a few years of paying the bills, the true meaning of the castle became apparent. For castles are expensive things to live in, and if you don't think so, ask the man who owns one!

A friend of mine sat dejectedly across the office from me recently and announced that he was several kinds of a fool. Within the past year he had moved from one city to another, and in making up the family budget he and his wife had decided they would not—in fact, could not,—exceed the sum of \$75 rent per month.

This man was a good judge of values. He knew what he wanted in location and in number of rooms. Agents showed him houses at \$125 that had everything he wanted—but that was too much. They showed houses at \$110, not so many at \$100, a very few at \$90 and \$85—and as the rents went down, so did the desirability. But having made the decision not to spend more than \$75, my friend had stuck to his guns and finally was able to rent a house for that amount.

Of course it wasn't in just the right neighborhood, it wasn't quite large enough, he wasn't optimistic about the heating, and there were other drawbacks. But nevertheless he felt that he had done the conservative, wise thing. Now, several months later, he knew he had been wrong and the knowledge made him angry.

For one thing, his heating bill had run more than \$200

for the season. To obtain domestic hot water during the same time he had spent \$10 a month. And with his good knowledge of equipment it had suddenly occurred to him that he could have rented one of the more expensive houses after all, saved himself trouble and discomfort, lived much more conveniently—and not spent any more money.

"I rented a poor man's house that only a rich man could afford to run," he lamented, "when I should have realized that it is the man of limited income who has to have good equipment."

The importance of operating expense has often been overlooked, not only by homeowners, but by builders, house salesmen, financing agencies, and every one with an attractive stake in the home market. There has always existed a feeling on the part of builders that the factor of monthly operating cost meant little or nothing to a prospective buyer, but perhaps they have been deluding themselves.

The Customer Research Staff of General Motors asked more than a million car owners to tell them what they most desired in an automobile. The group surveyed was divided into three categories, by their ownership of low-medium-, and high-priced cars. The results were astonishing when it is considered that most of us think such things as speed, power, streamlining, and glamour are the prime movers in car sales. The low- and medium-priced groups voted for *low operating cost* as the most desirable characteristic, and only the owners of the high-priced cars considered this item of secondary importance.

Just as automobiles are bought to be used—and not to



"His heating bill had run more than \$200—he had rented a POOR man's house that only a RICH man could afford.

"It's the man of limited income who HAS to have good equipment.

"The cost of home ownership is made up of two elements: the cost to buy, or capital investment, and the cost to operate or live in, which is operating expense.

"Operating equipment is one of the essential differences between a house and a barn.

"The cost to pay for a house and the cost to live in it come out of the same pocketbook."

How Quality Operating Equipment Reduces Monthly Outlay

	ASSUMED FIRST COST		ASSUMED MONTHLY OPERATING EXPENSES	
	HOUSE A	HOUSE B	HOUSE A	HOUSE B
LOT, STRUCTURE, etc.	\$4000	\$4000		
FURNACE	350	495	\$800	\$600
WATER HEATER	(WATER HEATING INCLUDED ABOVE)			
WIRING	100	115	300	285
CABINETS	60	90	.50	
CAB. SINK, DISHW'G, GARBAGE	60	375	325	.68
COOKING	75	130	330	240
REFRIGERATION	115	135	150	100
FAN and CLOCK		40	-	.12
TOTAL	4760	5380		
TAXES, INS., MAINT., DEP'N			1735	1748
DOWN PAYMENT .	560	580		
REMAINDER	4200	4800		
MONTHLY AMORTIZATION	2440	2789	2440	2789
TOTAL MONTHLY OUTLAY			6180	5842

be parked in a garage for lack of gas and oil-so houses are built to be lived in. The responsibility and the interest of the architect, the builder, the house salesman, and the lending agency do not end with the sale. A house represents probably the biggest single investment the family will ever make, and architects and builders will serve the best interests of their clients, their professions, and themselves if they provide that customer with modern equipment to conserve the investment and set high living standards. With such house, a salesman finds that he has an opportunity, perhaps for the first time, to sell modern living and not just shelter-at-a-price. And certainly a house having high-quality equipment in respect to heating, wiring, lighting, and kitchen offers a much better mortgage risk, since what a house costs to live in has a direct bearing on both the owner's ability and his willingness to continue payments.

There is an additional point worth making in any con-

sideration of low-priced homes. As the overall cost of a house is reduced, the modern operating equipment which that house contains assumes greater importance in the eyes of the prospective purchaser, commanding his interest which otherwise might be lost because, perhaps, the size and appearance of the less-expensive home is disappointing.

In the last analysis, the new home market has to be a buyer's market. His interest is paramount, and if he is well-served, so are the architect, builder, salesman, mort-gage-holder, utility company, and supplier of equipment. In approaching the subject from the angle of the customer, it is to be noted that the cost of home ownership is made up of two elements—the cost to buy, or capital investment; and the cost to operate or live in, which is operating expense. The capital investment is represented by land, structure, and operating equipment, and these all involve the factors of first (Continued to page 193)



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Houston Clamors to Buy Well Built, Easily Maintained Garden Oaks Homes

Texas Development Enjoys Phenomenal Success in Low Cost Home Field; Well **Equipped Models Attract Many Prospects**

ITH designs so attractive that the houses sell before completion, the new 1941 model homes presented by Garden Oaks, Houston's smart but moderately priced subdivision, has enjoyed remarkable success in the sales of its new Fourth Section. So great has been the demand for these new 1941 models that the Garden Oaks Company was compelled to hold one off the market as a demonstration.

The demonstration home pictured here is one of a group of 16 houses constructed under the FHA Title I, Class Three classification, in which the purchaser buys only the improvements upon the property, and leases the home site at a moderate annual rental fee from the Garden

29-8" BED ROOM BED ROOM GARAGE FLOOR PLAN

Oaks Company. The buyer has the right also to acquire the building site at any time during the 31-year tenure of the lease. This enables the purchaser, who has only \$195 with which to make a cash down payment, to acquire immediate possession of a beautiful, roomy, architecturally sound home, without the necessity of previously having acquired a building lot, or engaging in intricate financing schemes. The succeeding FHA payments may be as low as 99 cents per day, with a total cost for the house well under \$3000, including utilities, grading and landscaping.

"We are opening and developing only one street at a time," said E. L. Crain, president of Garden Oaks Company, in an interview with American Builder's representative. "This enables us to concentrate our construction crews upon a relatively small area, and thus makes for greater efficiency and lower supervision costs.

"Building a fine home of this type at a low price involves much thought and planning, and is really only possible with an organization in position to erect a group





years, we find buyers today appreciate such plus value. Set forth here are a few of the items that add to the cost, but also add proportionately more to the life of the structure:

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1. Solid concrete reinforced floating slab foundation. Before pouring concrete into the forms, the ground is treated with creosote as a termite preventative. The floating slab also lends to the architectural attractiveness of the structure.

2. All base or toe plates used in our construction of treated lumber, bolted to the concrete slab. Before bolting, the plates, two layers of 15 lb. felt waterproofing are applied with mastic between and on the top and bottom. The bottom felt layer is embedded in the waterproofing for the floor inside, and the top layer is turned up against the wall, thus preventing any moisture seeping in.

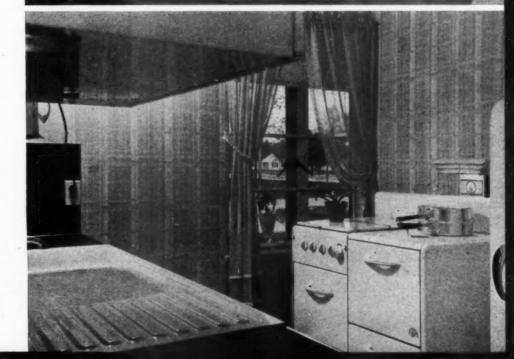
3. Bracing. The frame of the building is not only braced in keeping with FHA minimum construction methods, but additional bracing is used. The roof is well braced to the ceiling joists over bearing partitions.

4. In the group of Title I houses now being constructed, steel sash used exclusively. In this climate, ordinary wood sash and frames deteriorate more rapidly than in a drier climate. We find the steel sash add attractiveness to the building, in addition to the saving over a period of years. A further advantage is that no trim is needed around the windows, and the shades or Venetian blinds are installed

(Continued to page 192)

ABOVE: Garden Oaks 1941 demonstration home and, at right, a view of the combination living-dining room showing built-in cabinets with mirror back. The kitchen is seen looking across the counters and cabinet unit.





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PROFITS IN PAINT

Skillful Color-Styling with Quality Paints Makes for Quick Sales

Good materials and workmanship on original paint job win favorable attention and assure lasting buyer satisfaction

AINT authorities have for years stressed the importance of care, thoroughness and quality when painting a new house for the first time. They have urged, pleaded and threatened against cheap paints, skimpily applied, declaring—and truthfully—that the first coats determine the lasting quality of all future coats and that quality paints on the original painting of the new

house would protect and preserve it.

These are facts well known to paint men; but, up to now, they have had a hard time converting home builders to the wisdom of spending the little extra required for careful priming, back priming and a good three-coat job of quality paint. The bill for painting, coming on top of all the construction expense, seemed too much; it had to be content with "what was left," which was usually little enough just to "get by." First cost loomed up as the one big consideration, regardless of what the cheap paint and the skimped application might do to future values.

Lasting Quality Now the Aim

Today, however, builders face an entirely different situation. With long-term financing running 20 years or more and the present system of getting all costs into the long-term first mortgages, to be paid off monthly, the first cost is no longer so important as length of life and freedom from upkeep and renewal expense, which make the more expensive item decidedly the cheaper in the long run. And so, as to paint; the old-time habit of skimping on the painting of the new house (Oh, we will let that go!) now shows up as very poor, short-sighted economy indeed. The little extra for quality paints and thorough workmanship adds but a trifle to the monthly pay-off payments; and the longer life of the better paint job actually saves money for builder and owner.

The buying public of 1941 is noticeably design- and color-conscious. "Model homes" that attract the biggest crowds are gems of the painter's art. The best selling subdivisions are those in which the houses have been skillfully color-styled; the homes decorated, both within and without, with individuality and character. The quality of their paint finish is so noticeable that buyers are quickly impressed. The confidence, created by the evident superiority of the painting and decorating, then broadens to include the unseen structural details of the building; and

a creative buying atmosphere results.

So, from the point of view of the operative builder the small extra investment in good quality paints and attention to color-styling quickly pays out and gives the builder as well as the buyer an incentive to view the original paint job in its proper long-term, lasting-quality perspective. The better quality and care in painting assure the builder a quicker sale and the buyer a sounder 20-year pay-off

"Save the surface and you save all" used to be a power-

ful slogan for good paints; and it still expresses a potent truth. Good lumber, properly dried, carpentered into place, and painted, stays put; it gives lasting service. The good paint protects it-it saves the surface and it saves all. And not only is the new house, properly and promptly painted, saved from warping, cracks, blisters, but also, when it finally does need repainting or restyling, it offers the painter a suitable surface for another quality job that will last and last.

Cheap paint, on the contrary, does not give proper protection; it cracks and scales, fades and lets in moisture. It soon has to be renewed, often at extra expense of completely burning off a paint job, necessitating two or three new coats of durable paint. As a result the builder is hurt in his reputation or business standing; and the owner is hurt in his pocketbook. Too much upkeep expense sours the customer, kills the market and may even overload the entire financial setup and lead to loss of the

home through foreclosure.

Good paint, well applied, is certainly one of the home builders' best guarantees of lasting quality and permanent low cost-assuring final satisfaction and success in the home building and buying adventure. Good paint is (1) white lead paint, or (2) the highest grade prepared paint of reputable manufacturers. It is certainly a costly mistake to use substitutes in paint in place of high quality standard materials. Of high importance are the basic ingredients, pure white lead and linseed oil and dependable pure gum turpentine. Gum turpentine is an excellent solvent which penetrates the wood, anchors the paint and dries properly. It has special properties for absorbing oxygen and taking it to the oil, making for a long-lived paint. It is now widely sold in approved sealed cans which assure a pure, high quality product.

Examples of Color-Styling

On the following 12 pages American Builder readers are offered a selection of some of the best current examples of color-schemes for home painting and interior decorating. Originality is expressed in these color treatments. They scintillate with brightness against backgrounds of conservative charm. Each has been tested for its popular sales appeal. Each has that mark of

quality which rivets the attention.

With the entire building industry intent on delivering "more quality houses for the money" this year by taking advantage of the popular 20 and 25 year mortgages with monthly payoff and so putting the emphasis on lasting quality rather than on low first cost regardless of ability to stand up and give service—such high quality home painting as shown in these beautiful color plates should have a far-reaching effect-making for quicker sales, better satisfied home buyers and more lasting low cost satisfaction in home ownership.

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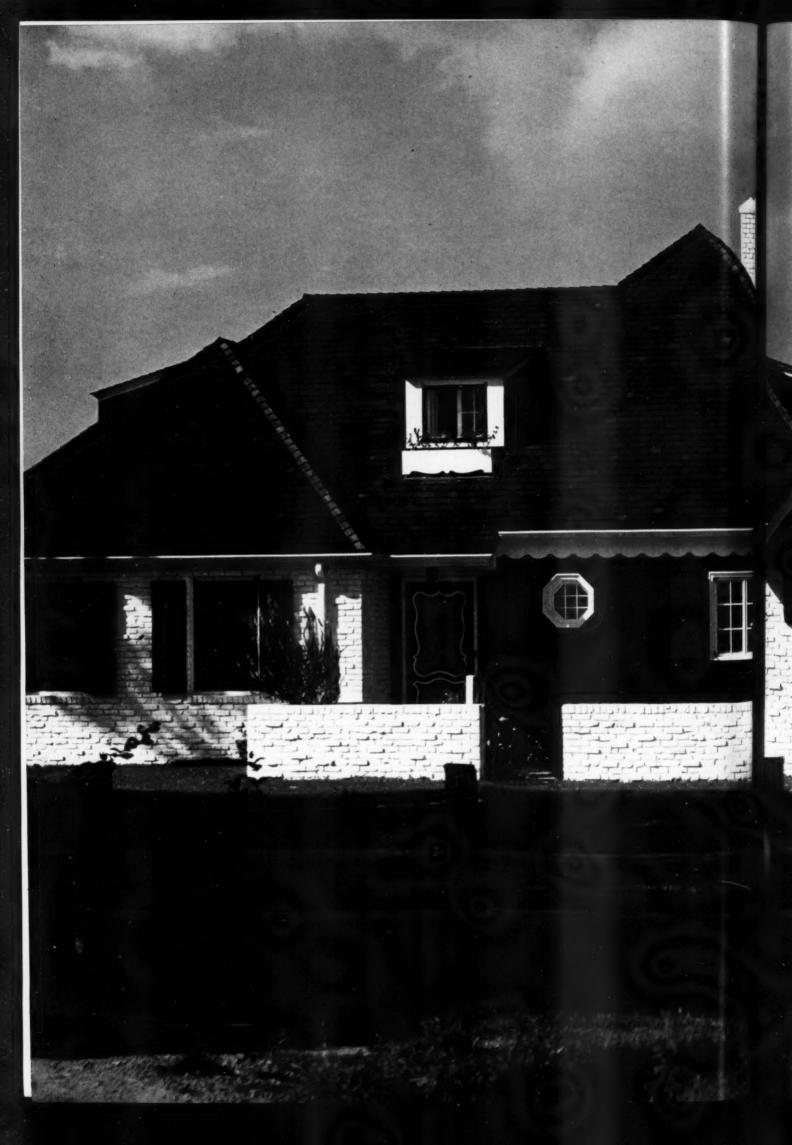
Color Styled Homes that Sell

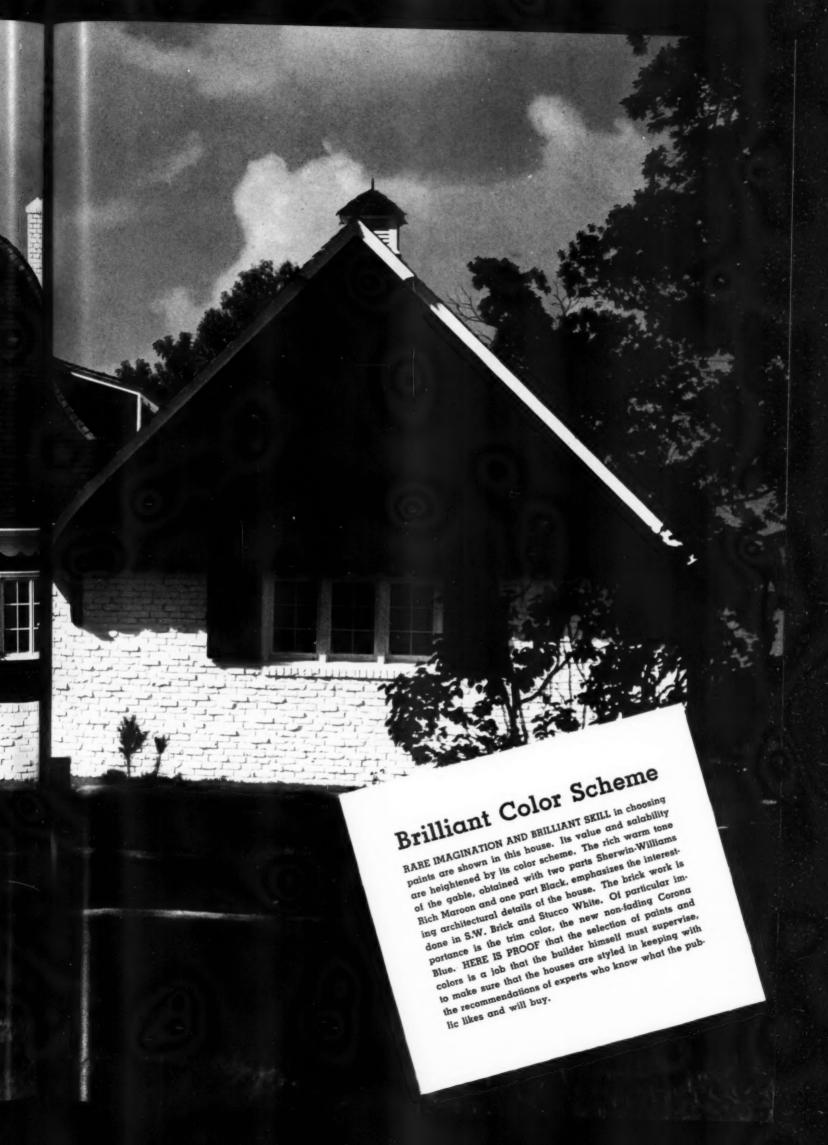
PICKING THE RIGHT PAINT COLORS for a house is a tough job unless you know how to go about it. The builder who chooses the correct colors and blends them harmoniously attracts buyers. Too often poor taste or the unwillingness to take the advice of experts, scare prospects away... and spoil the salability

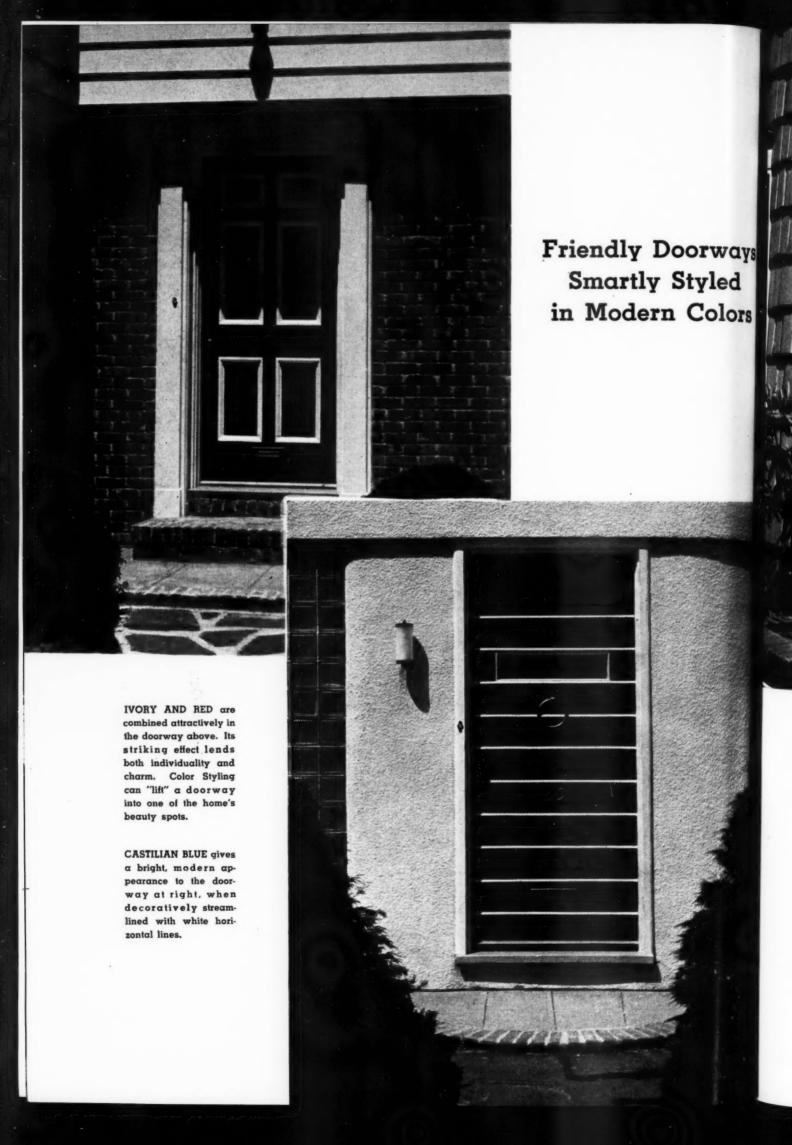
of well designed and well conditioned homes. In this twelve-page section of homes in brilliant, true-to-life colors, AMERICAN BUILDER presents color styling recommendations of experts. These are homes styled in colorful, modern fashion to make sales, and were selected by AMERICAN BUILDER from the new 170-

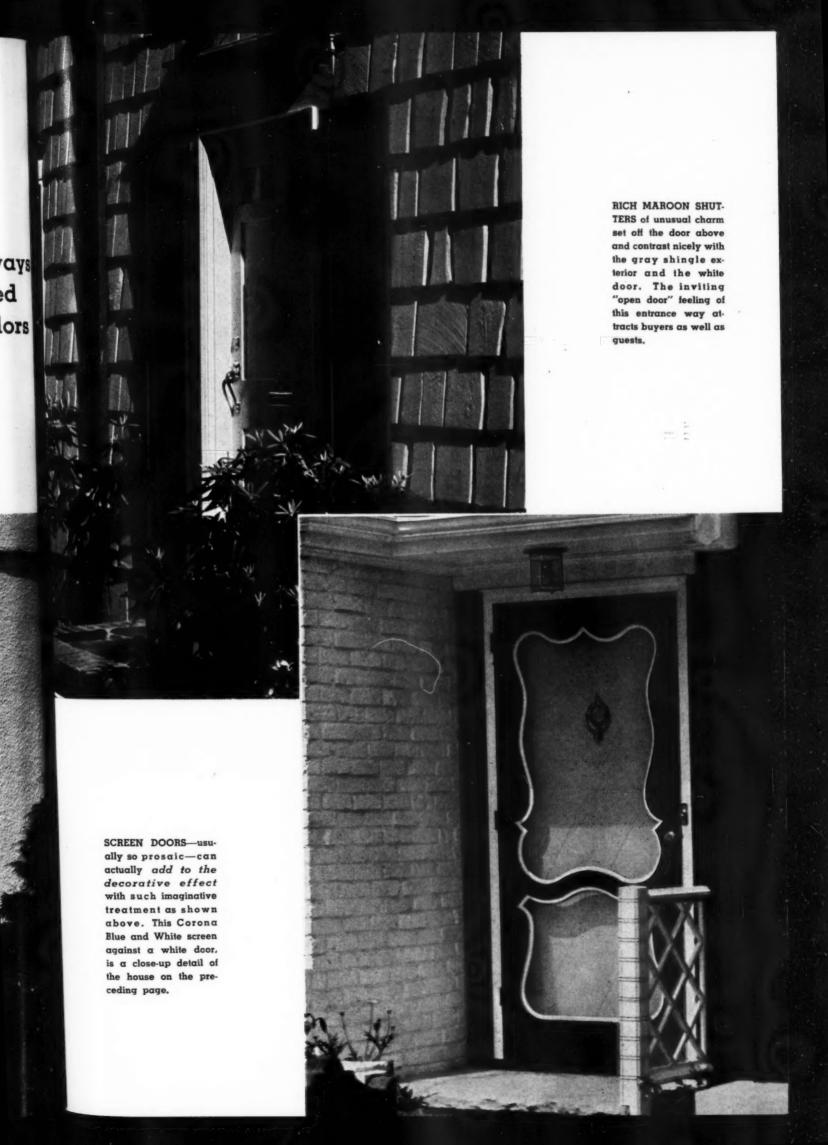
page "Paint and Color Style Guide" (Vol. 2) recently released by The Sherwin-Williams Company. These are the recommendations of expert color-stylists in the firm's Decorative Studios, who will offer, upon request, complete color-styling suggestions for a subdivision, a group of homes or an entire street.

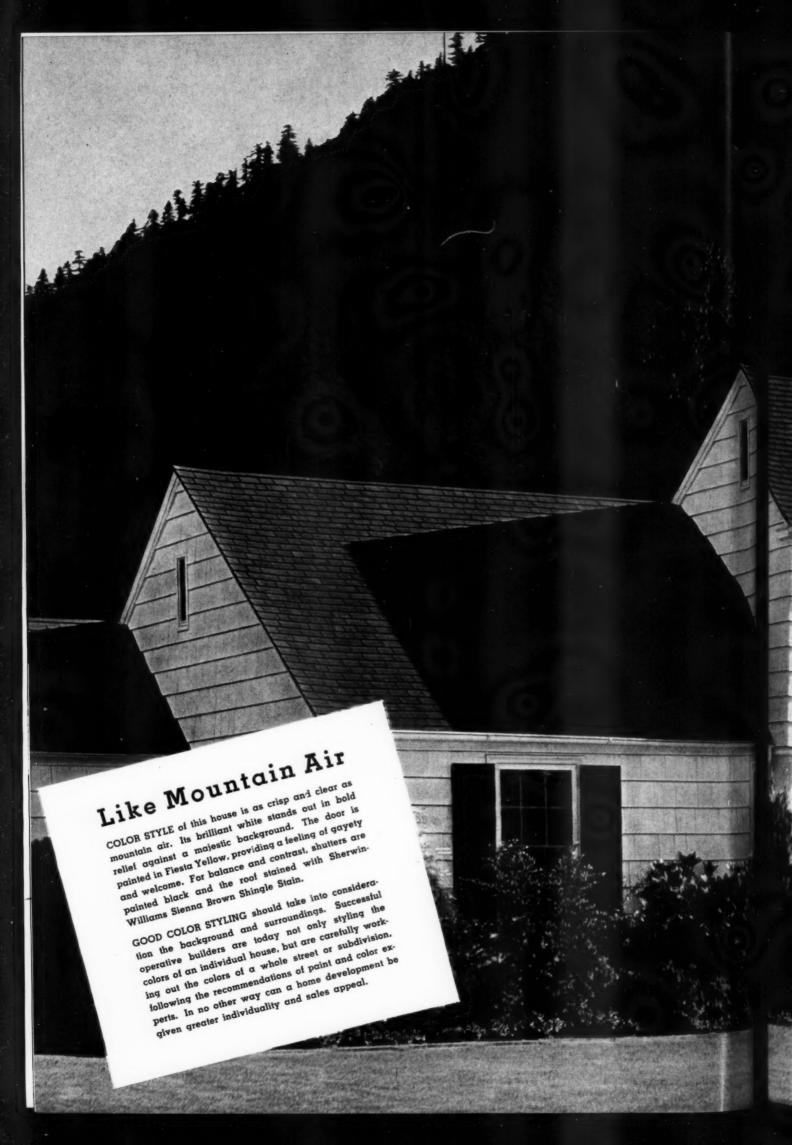










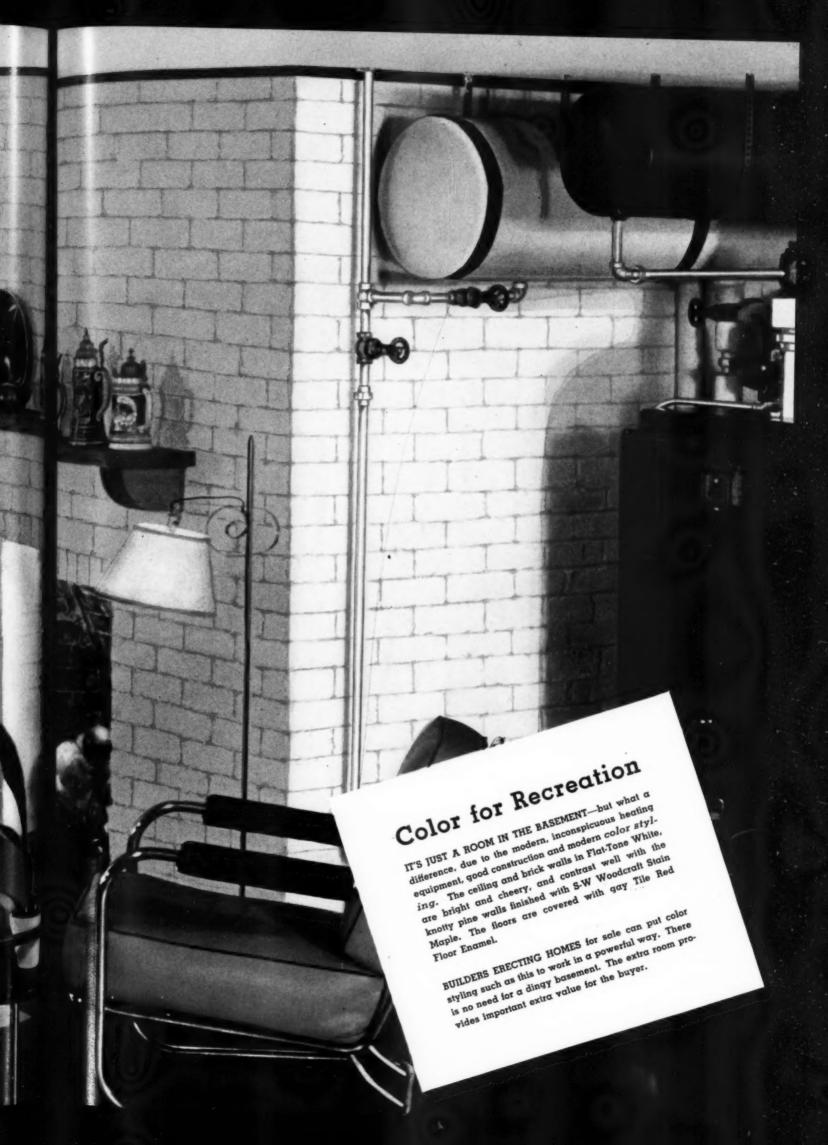












Color Styling For Kitchens

HERE ARE THREE different color schemes for the same kitchen—colors that are gay and irresistible enough to delight the heart of any housewife home prospect. While the kitchen equipment itself is direct, practical and efficient, the room has been given life and sales appeal through the decorations. The three kitchens shown indicate how easily the same kitchen design can be made to look entirely different merely through the variation of wall treatment—a technique which builders will find helpful and economical in duplicating plans from one house to another.

Ceiling and three walls painted with Enameloid Sunny Yellow. Left wall painted with Enameloid Lettuce Green.





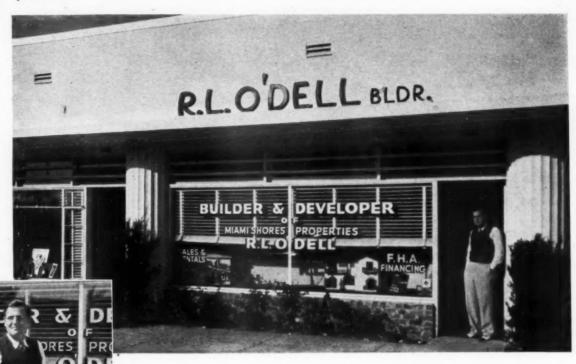
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Ceiling and three walls, Enameloid Sunny Yellow. One wall, figured wallpaper, that picks up the yellow tone and provides contrasting figures.

Ceiling and three walls painted with Semi-Lustre Canary Yellow. Wall at left painted with Semi-Lustre Vogue Blue. O'DELL'S attractive Miami Avenue office is presided over by Mrs. O'Dell (below), who plays an important part in running the business. The handsome gentleman here is R. L. O'Dell himself.



O'Dell Builds Well

(and how they sell!)

37-year old Miami Shores, Fla., builder sells lifetime, low upkeep houses for \$30 to \$40 a month. Rhyming want-ads help sales.

IN Miami Shores, a suburb of Miami, Fla., R. L. O'Dell is building and selling fine small homes that effectively refute the charge sometimes made that Florida homes are flimsily built.

O'Dell realized, as more and more smart builders do, that home buyers are primarily interested in houses that are inexpensive to live in. He set out to build houses that are firesafe, termite proof, windstorm proof and free

from upkeep expenses.

Due to the Florida homestead tax exemption, the taxes on his houses are very low, heating costs are practically nonexistent, and O'Dell goes still further to provide solar water heater systems that provide ample hot water heated by the rays of the sun.

Thus, on a typical \$5,500 house sold on a \$550 down payment, the total carrying charges on the 25-year mortgage are only \$35 a month, including FIIA insurance, fire and windstorm insurance, taxes, interest and amortization.

This really gets home ownership costs down to bedrock, especially in view of the fact that these houses are so substantially built and well finished and equipped that the owner will be sure of a lifetime of low-cost operation.

Although he's only 37 years old, O'Dell has had an enviable record of success in Miami, having built several hundred homes in the past five years in a wide price range. A considerable part of his success is due, no doubt, to

the fact that he is ably assisted by Mrs. O'Dell, who runs the office and handles a good part of the work, specializing in details concerning the equipping and decorating of the homes. The firm's office is in a large, modern store and shop building in Miami Shores that O'Dell erected and just recently sold.

The O'Dells seem to get a lot of fun out of building and selling homes. They carry considerable display advertising in the local newspapers but have recently been getting good results from a series of want ads. Each day a new and clever want ad is carried—frequently in rhyme, and these have recently attracted much attention. Following are some of the more lively O'Dell-O-Grams:

O'Dell-O-Grams

YOU ALL KNOW that George Washington cut down the cherry tree, but did you know that O'Dell has cut the cost of a house down 30 per cent and is passing the savings on to you? See model at 9314 N.W. Second Ave.

A ROLLING STONE gathers no moss. Buy an O'Dell home and be your own boss. See model home at 9314 N. W. Second Av.

ROSES ARE RED, violets are blue. An O'Dell house would be good for you. See model home at 9314 N. W. Second Av.

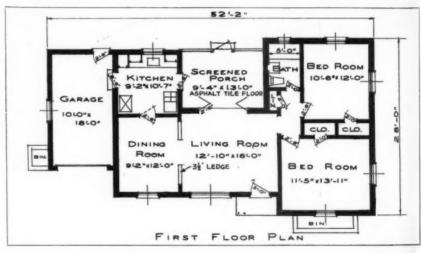
I MAY BE CRAZY to give away these nice homes in



WHITE CEMENT TILE ROOF and pink or cream stucco walls give charm to this typical small O'Dell home in Miami Shores, designed by Architects Petersen and Wolz. TruCost Figures for this house will be found on page 199.



ON THE JOB, O'Dell points out metal rafter anchor to be imbedded in concrete beam.



. O'DELL'S Florida floor plan has good cross ventilation and a screened porch off living room. Low ledge separates dining room.

Miami Shores for \$4,500. But it's lots of fun. See model home at 9314 N. W. Second Av.

NO SANTA Claus?—There's one in Miami Shores. I've built and practically given away 60 houses in the past 8 months. See O'Dell and save. Model home at 9314 N. W. Second Av.

WOULD YOU WALK UPSTAIRS to save \$500? If interested in a home, see my houses at 9314 N. W. Second Av. Then see R. L. O'Dell, 2118 N. Miami Av.

AN APPLE A DAY keeps the doctor away. This is an old adage, they say, but if you're in the market for a good place to park it, see O'Dell homes today—9314 N. W. Second Av.

CHAMPAGNE HOUSE—beer pocketbook? We have a house with champagne features and a beer price. Built by R. L. O'Dell, 9314 N. W. Second Av.

The O'Dell houses in Miami Shores are built on 75×125 foot plots with a setback of 30 feet from the street. The buyers are a good class of all-around residents who want substantial but attractive homes that are inexpensive to maintain and live in.

What do we mean by "well built" in referring to the O'Dell homes? In the first place, they rest on 10" x 30" reinforced concrete footings. All lumber that touches concrete is creosoted, even including the rafter plates. In addition, the foundations are covered with a continuous termite shield of Toncan metal with soldered joints.

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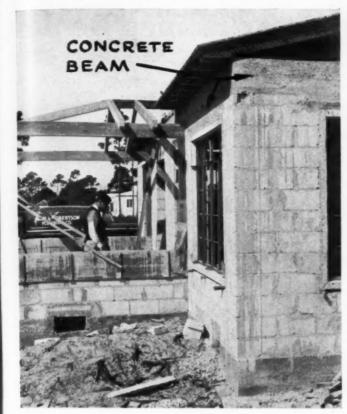
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Walls of the O'Dell houses are of 8" concrete blocks, with a waterproof stucco exterior painted with cement paint in very attractive pastel colors, such as cream, pink and delicate shades of blue. We regret to say that photographs can only partly show the real beauty of such Florida homes as these as the effects of the attractive colors are lost. Inside, the concrete block walls are furred with 1 x 2 strips to which are applied gypsum board and two coats of plaster. Crittall steel windows are used, and all sills are of attractive tile.

An interesting feature of the O'Dell construction not commonly appreciated by northern builders is the 8" x 12" reinforced concrete beam built at the top of the masonry wall. This extends unbroken around the entire perimeter of the house and effectively reinforces the entire wall con-

1941.

ned by



SUBSTANTIAL CONCRETE MASONRY, with 12" "hurricane proof" beam at top of wall, to which rafter plate is bolted.



FORMS FOR CONCRETE BEAM at top of wall, showing reinforcement and metal rafter ties in place. (See drawing below.)

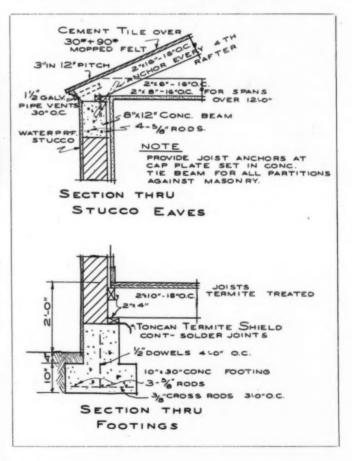


POPULAR MIAMI SHORES MODEL with white tile roof. Floor plan similar to house at bottom of page 191.

struction (see accompanying drawing at the right). The concrete of this beam goes down into and becomes part of the upper layers of masonry. Anchor bolts are imbedded in the concrete every 32 inches, to which the rafter plate is securely attached. In addition, metal anchor strips are imbedded in the concrete and nailed to every fourth rafter. This type of construction is believed to provide an effective protection against windstorms.

Another item of unusual interest to northern builders is the solar water heater system installed which produces ample domestic hot water from the heat of the sun. Made by the Solar Water Heater Company of Miami, this system consists of a light frame of copper tubing covered with special glass, with copper tubing leading to a 66-gal. water tank. The sun shining through the glass heats the water in the copper tubes almost to the boiling point. The tanks are equipped with an electric booster which raises the temperature of the water on those infrequent days when the sun does not shine in Miami.

O'Dell uses a clever system of building his storage (Continued to page 190)



QUALITY FLORIDA DETAILS show reinforced concrete beam to which rafters are anchored, built-up roof with white cement tile surface, substantial 10" x 30" concrete footings, termite shields. Inside walls are furred and plastered over gypsum board.

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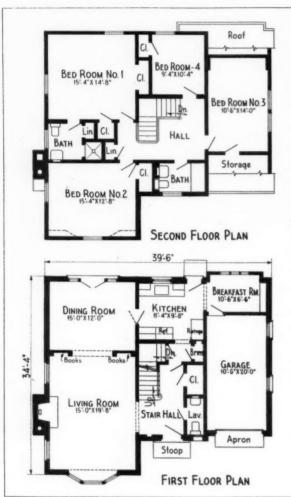
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Chicago Buyers of Better Homes Demand

Irvin A. Blietz, Developer of Connecticut Village, on the North Shore, Where Houses Are Selling up to \$30,000, Finds Present Day Prospects Want Hidden Values in Structurally Sound Design



Photos by Curt Gottschalk

ESS than two years ago there was a deserted section of "no man's land" lying between two of Chicago's fine North Shore suburbs—so hopeless in appearance and seeming possibilities that neither would claim it—which today is one of the new home show spots of the metropolitan area. Irvin A. Blietz, builder in Wilmette, Ill., had the vision and showmanship which dared him to create here his Connecticut Village development.

The price ranges up to \$30,000 for the more recent eight- and nine-room houses (as illustrated opposite below), although the earlier speculative designs were six and seven rooms selling for considerably less. This rising price level was natural, as the property became more and more desirable as it was developed, and the winding streets, Colonial lampposts, beautiful landscaping and harmonious styling set the fine character of the section.

Today, on about three-quarters of the approximately forty lots into which it was divided, houses are complete or in the final stages of construction. Most people considering building on the North Shore have at least inspected the Blietz houses here, even if they did not finally buy. For this reason, the reactions of this class of buyers give a good index of how they are approaching today's market and what they are demanding in homes.

An interesting observation on the trend of what is wanted by these above-the-average-income buyers of well constructed homes indicates a desire to stabilize living costs, and the methods of financing selected by the purchaser substantiate this. According to Mr. Blietz, "Ninety per cent of recent buying inquiry is based on the use of real estate as a hedge against a possible future lower value of the dollar. Thirty per cent of actual sales are for all cash and 20 per cent for half cash. About 50 per cent of buyers take the longest terms and largest loans obtainable, figuring there's nothing like a big mortgage to stabilize one's finances through a possible period of inflation. In such times the debtor always has the advan-



THE typical home pictured at the left, as seen in Colonial Village, Wilmette, Ill. has four bedrooms on the second floor, while the design on the opposite page has a first floor library which can be used as a fourth bedroom. Irvin A. Blietz, builder and designer, features the low cost of good construction in these houses. TruCost figures on page 199.

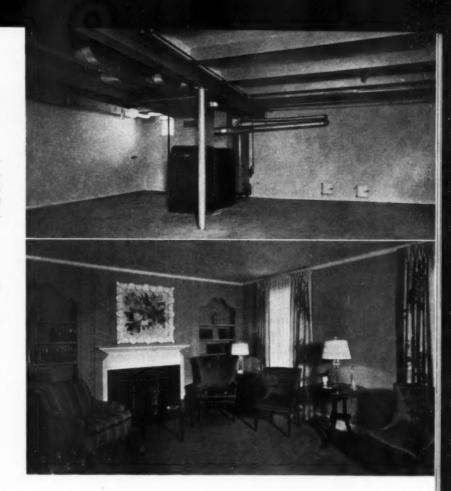
Good Construction

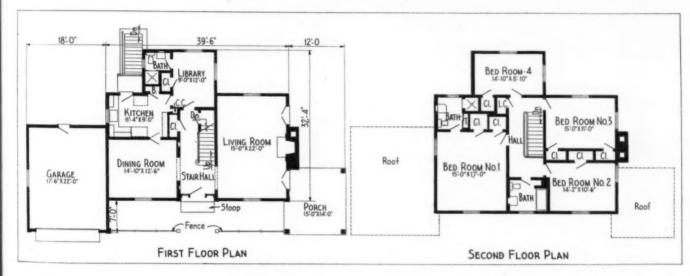
THE upper view at the right shows typical basement construction in a Blietz Connecticut Village home; poured concrete was used for foundation, basement and first floors, with steel beams. The lower view shows a smartly styled living room with paneled wall and built-in cases flanking fireplace.

tage. He may pay part of his obligation in dollars that are worth less than when he made the deal."

This type of buyer realizes that it is becoming more and more difficult for capital to earn an income to pay living costs and is regarding it as a surplus to be put to work. Naturally, a house bought on this basis must be structurally sound so as not to impair the original investment, and maintenance costs kept at a minimum.

For instance, the upper view at the right shows a typical Blietz Colonial Village basement with poured concrete footings and foundation, steel lally columns and beams supporting Jones & Laughlin Junior beams and poured concrete first floor slab. Other features of good construction which will return dividends in the form of low







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ABOVE: Two more Connecticut Village designs with typical modern classic detailing, one in stone veneer, the other in stucco and siding; both designed and built by Irvin A. Blietz, Wilmette, Ill., as described on the preceding pages.

maintenance costs are kiln-dried Y.P. framing; 3-coat plaster on USG Rocklath attached with resilient spring clips; Celotex Vapor-seal sheathing; Balsam-Wool in sidewalls, and rock wool above ceilings to give complete insulation for low heating costs with Bryant gas-fired winter conditioning units.

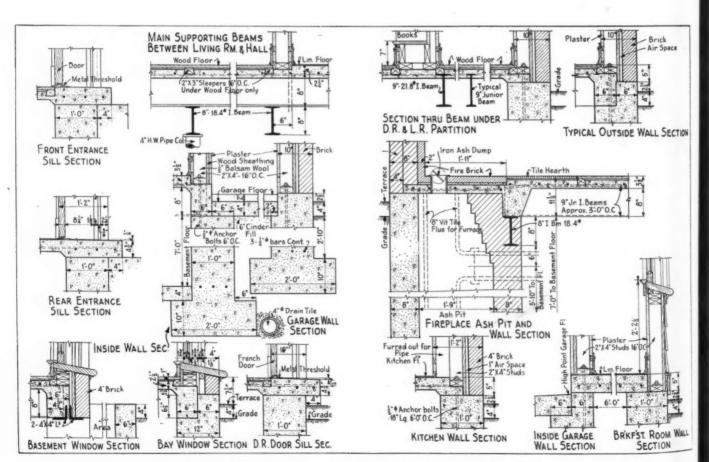
The first house shown in this article has an exterior of common brick painted with Cabot's Double-White on the first floor, cypress clapboard above, and a red cedar shingle roof.

The other house features cypress vertical boards and battens on the first floor, and hand-split red cedar shakes on upper sidewalls.

Interior birch trim, as well as exterior trim and siding,

is primed on all four sides. O'Brien paints, Pittsburgh glazing, copper screens and McKee upward-acting garage doors were used. Equipment items include Standard Sanitary fixtures, Corbin hardware, Franklin tile, Midwest kitchen ventilating fans, Lightolier fixtures, Imperial wallpaper and Armstrong linoleum.

Planning both the houses and grounds is carefully controlled throughout the development for the maintenance of values. Individual houses, as shown in the two typical plans with this article, are carefully engineered for modern living with special emphasis on closet space, kitchens, access, interesting views from windows, extra baths, etc.—all the much demanded features which make a house salable and keep it sold to a satisfied owner.



DETAILS of foundation and first floor construction; typical Blietz design using steel beams and concrete floor slab.



THIS front cover home by Arthur P. Swanson, architect, Des Plaines, Ill., was built in Park Ridge, Ill., on a finely wooded site. The Colonial exterior was inspired by Callfornia design trends.

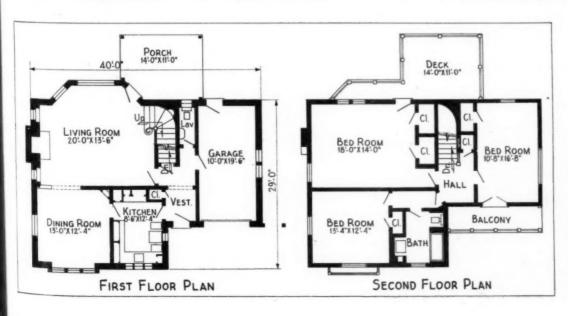
Photos by Ray E. Willis

Planned for Low Cost Livability

ACTUAL dollars and cents to be saved in anticipated maintenance costs naturally appear very important to the home owner at the time his home is being planned, but over an extended period the added satisfaction and savings of a well engineered layout should be equally appreciated. Sometimes savings along this line amount to as much as average maintenance savings if the owner must alter certain portions of the structure to give him the livability needed to satisfy his ideas of comfort and convenience. Too frequently he feels that some change must be made before his house becomes the home he had hoped for—a little

more headroom at stairs, an inside door rehung to swing the opposite way when furniture arrangement hasn't been taken into consideration, an opening added for better circulation, a partition moved for additional necessary space in one room and less in another, etc. What builder hasn't been called back to make such changes after a house has been lived in for a year?—things which might have been foreseen in more carefully planned design. And the owner will blame the designer even when he has insisted on certain features, sizes and details that might later prove unsatisfactory.

(Continued to page 188)



THE six-room and built-in motor room layout is most novel and livable, with living room, porch, master bedroom and deck overlooking the rear. The studio bedroom over the garage has a timbered ceiling and private balcony.

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PITTSBURGH BUILDER FINDS

"Luxury Items" Speed New Home Sales And So Add Nothing To Total Expense

ARL BUCKHEIT and his associates operating the South Hills Company at Mount Lebanon, Pittsburgh's elite residential suburb, have found that it pays well to include extra items of value in their homes so that they will sell quicker. They figure that it costs at least \$50 per month to hold a house unsold after it is completed. By adding extra items of strong sales appeal, they are able to cut this lost time. In effect, they simply give the purchaser an extra incentive for quick action. If the house moves in one month instead of in three, there is \$100 for extra items that can be added without costing the builder a single penny.

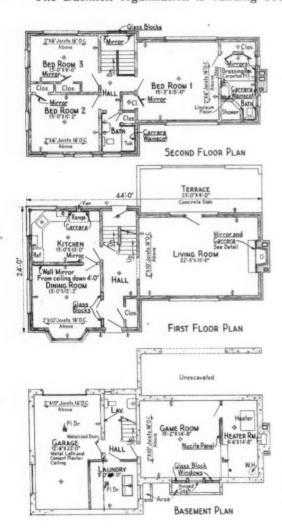
This idea of incorporating attractive luxuries of definite sales appeal has been carried still further by the South Hills Company in its current program of "Luxury Homes," which are being offered at a price range of from \$5,000 to \$20,000. The advertising, which dominates full page space in the prominent Pittsburgh papers, features a list of sixteen "luxury" items and the houses themselves make good on the promise of the newspaper announcements. Visitors, thronging these new home developments every weekend, find the actual homes more glamorous even than promised.

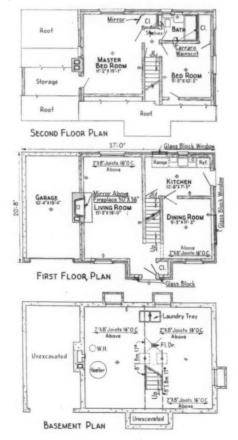
The Buckheit organization is building 300 houses in

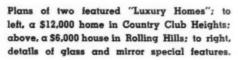


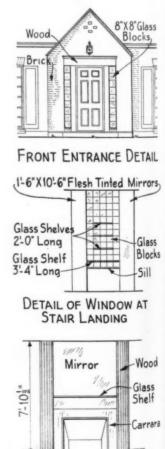
Mirror panels over mantel and Carrara mantel facings give style to South Hills homes.

its current program, about half of these being sold before the work is started, about half after completion. Three different locations in Mount Lebanon are being built up as follows: Rolling Hills, with \$5,000 houses, Country Club Estates, ranging from \$6,000 to \$8,000, and Country Club Heights, from \$8,000 to \$15,000 and \$20,000. All are designed in the South Hills Company office where William A. Trimble, registered architect, is in charge of design. Several different building contractors do the ac-









DETAIL OF FIREPLACE

IN LIVING ROOM

tual construction, always on a contract bid basis.

Here is the list of "luxury" features promised for these "Luxury Homes" in the South Hills Company's adver-

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8"Glass

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"1. Wider use of Glass. For example, mantel and fireplace treatments of mirrors, Carrara structural glass and metal. Wall mirrors in dining, living and dressing rooms. New glass blocks in baths, game rooms, basement areaways, stairwells, kitchens, bars. Larger windows. Picture windows. Built-in memo pads and movie screens of Nucite chalkboard glass. Full length door mirrors in bed and dressing rooms. Bathroom and dressing room walls of Carrara structural glass. Carrara glass splashboards in kitchens.

2. Houses designed so all four exterior sides will be

equally attractive in appearance.

"3. Houses carefully orientated on lots for best effect.

"4. Larger rooms, more usable space.

"5. More bathrooms for the size of the houses.

"6. Revamping of the bathroom off master-bedroom in-to a modern "dressing-roombath."

"7. Increased closet space with accessories such as shoe, tie and hatracks built-in.

"8. Expert decoration, geared to suit the various rooms involved. Independent color and design experts have worked with us on this.

"9. Water-proofed foundation walls.

"10. More elaborately equipped kitchens, with more work space and better lighting.

"11. Improved lighting throughout the houses.

"12. All-gas, air conditioned heating systems for greater cleanliness and efficiency.

13. Thorough insulation with glass wool or rock wool.

"14. More elaborate landscaping. Our idea is to landscape every lot in such a way as to make the home site complete and ready for immediate occupancy.

"15. All 'Luxury Homes' built with the best materials, many of them entirely new to this type of construction; up to the standards of the Mount Lebanon building code; and in excess of FHA standards. And built by Allegheny County's largest home builders, E. J. Ryan and John M.

(Continued to page 177)

at new low prices!

South Hills Company's new building policy gives you beautiful homes, richly provided with special luxury features previously available only at premium prices in the home you built yourself. And these "Luxury Homes" are priced lower than ever before in history!

LIERE is the kind of home you dream about owning!
Built in accordance with South Hills Co.'s new
policy which gives you true "Luxury Homes" at regular home prion. They are designed to include as many
as possible of the extra-nice features, the special decorative and ornamental touches, the real luxuries of planning and construction which have never before been
available in ready-built homes of this type.

They represent a cross-section of thousands of
people's ideas of what they want in a home, gathered
from our own experience. And they reflect the nationwide trend toward more pleasant and gracious living.

Yet with all their added luxuries and de luxu appointments, these horses still sell for prices comparable so other ready-built homes which lack their refinemental These "Luxury Homse" range in price from \$7,000 to \$20,000 and offer you a chole of three fine "all gag," developments. Lynnwood Park. at the end of Vennen Drive off Washington Road. Country Club Heights ... off Caste Shannon Roulevard. And Country Club Estates . . . adjoining Country Club Haights. Read about the new, luxury features of these homes, listed below. Then come is and set us . . or telephone today . . . for more complete information.



Carrara structural glass, plate glass shower doors and special dressing room mirrors put sales punch into the bathrooms.

RIGHT: Typical newspaper advertisement much reduced in size.

READ THIS LIST OF "LUXURY" FEATURES FOUND IN THE NEW "LUXURY HOMES"

SOUTH HILLS COMPANY

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WINDOWS of Green Park Estates overlook a peaceful Long Island garden environment.

BELOW: Frank Taylor, chairman of Taylor-Woodrow Estates, Ltd., London, who named Long Island development after this famous London park.





"British Thoroughness"

Long Island houses built by London firm set high standard for low upkeep. J. L. Turner reports interesting sidelights on English builders in war

WHILE builders in England are temporarily devoting their time to more exciting and dangerous activities, there is an English firm doing an impressive job of home construction on peaceful Long Island, U. S. A., that offers one more example of British thoroughness.

Green Park Estates is a thriving 120-acre home community adjacent to Kew Gardens, on the site of the Queens Valley Golf Club. It is operated by William M. Noone and John L. Turner, who represent the Taylor-Woodrow Estates, Ltd., of London, England, one of that nation's largest home builders. Prior to the war, Taylor-Woodrow Estates had erected more than 11,000

houses in 11 years in England.

New home construction came to a halt at the start of the war, William Noone told American Builder, but his firm, as well as other British building firms, have been extremely busy in various types of construction, including government projects, defense works, repairing and reconstruction. One of the interesting sidelights of building activity "over there" is that employees of Taylor-Woodrow Estates have formed a rifle club and have to take frequent time out for rifle practice. Frank Taylor, chairman and managing director, gave the employees a piece of property for the range, and three British Army instructors have been giving the bricklayers, carpenters

and other workers thoroughgoing training in how to shoot. The club is known as the Taywood Rifle Club. "We have our defense problems here," commented John Turner, "but at least our carpenters and bricklayers on Long Island are not taking time out to practice on a rifle range."

Noone and Turner are young builders who came to the United States in 1937, attracted by the home building revival here. In their first year they built and sold more than 90 dwellings of the attached type in Queensborough. That trial balloon convinced Taylor-Woodrow that America offered as big a field in home building as Eng-

land had after the last war.

Noone and Turner quickly acquired a shrewd insight into New York building practice, and in their Green Park Estates project are building attractive single-family homes, which, while more striking in their appointments than their English counterparts, still have the quality construction for which English builders have been famous. To date they have built and sold 160 houses in Green Park Estates, most of which are in the \$7,000 to \$9,000 range. The houses were designed by Architect Arthur E. Allen, now a Major in the U. S. Army.

Noone and Turner named their new community after Green Park in London. They invited Thomas G. Grace, New York State director of the Federal Housing Admin941.

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COMFORTS of home are dramatized in this living room view of Green Park Estates. There's more "flash" in the American homes than those built in England by same firm.

istration, to break the ground for their new homes. In view of the fact that the ground was a golf course, Mr. Grace scorned the use of a spade or a steam shovel and appropriately broke the sod with a niblick, declaring that he yearned to gouge out a divot which he would not have to replace.

Mr. Noone and Mr. Turner are so thoroughly British that they say "righto" as nimbly as an American might say "correct as hell." They were so imbued with the spirit of home building in England, where all communities are called "Estates," that they insisted upon the creation of a completely "gardened" community. With the cooperation of the FHA engineers, they submitted a community plan that required the changing of several of New York's sacred regulations. Rexford G. Tugwell, head of the New York City Planning Commission; Robert Moses, Commissioner of the Park Department, and other city officials had to get together and decide that curving streets and gentle grades, in conformity with the natural slope of the golf property, were more desirable than the time-honored grid-iron street plan. Thus Green Park Estates has become the first planned home community in New (Continued to page 197)



ATTRACTIVE casement windows are featured in Green Park model.



NEW ORDER of the bath in Long Island features gold-colored brass fittings.



1941 GREEN PARK ESTATES plan has "no traffic" living room, fine dining terrace. Major Arthur E. Allen, architect.



Photo by C. E. Goodridge

SANDS HOTEL, designed by Roy F. France and built by J. Albert & Son, is typical of striking modern design widely used in Miami.



SUNSET ISLAND HOME illustrates blend of Colonial and Florida elements in modern style. White cement tile roof contrasts with pastel tinted exterior sidewalls built of brick or stucco.

Miami Modern

Florida building boom has produced new highs in building construction and architecture. Forty-two hotels with 2,800 rooms built in Miami Beach last year

By Joseph B. Mason

IAMI and its flourishing suburbs are like some dream of a world of tomorrow come true—a place where architects and builders get together and do all of the interesting things they have always talked about, and where there are plenty of customers with enough money to say, "Go ahead—we want to move in next month."

The cumulative result of more and more tourists, of a growing number of year-round residents, of new industries and of new national defense activities has made the Greater Miami territory one of flourishing building activity. Its hotels, apartments, shops and stores and residential developments have set new highs in architectural styles and in speed of construction.

Scintillating modern structures in white, cream, pink and pastel tints create a New World effect that is beautiful although somewhat breathtaking. It is true that many of the newer structures are gaudy and overdressed, but it is also true that a higher percentage are done in excellent taste and are setting an architectural style that will have an effect on building in other parts of the country.

The record of recent years is truly fabulous. Where else in the world except in Miami Beach were 42 hotels with 2,803 rooms built in one year, as they were in 1940, in addition to 179 apartment buildings containing 1,771 units? In addition, Miami Beach builders erected 313 residences worth 3½ million dollars last year, 43 store buildings worth a million dollars, 5 bungalow courts at \$77,000, and 933 addition and

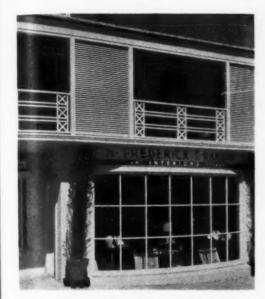


Photo by Manley Brower

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MOST OF THE MODERN Miami homes are long and low, as this brick bungalow designed by Architect Stefan Zacher of Miami Beach.



FRESH, modern treatment of a small Miami Beach shop in the new 41st Street area, designed by Arnold Southwell. Exterior, creamy pink.

remodeling jobs worth \$1,700,000. In Miami Beach alone, the building permits last year totaled \$15,961,000.

With this type of concentrated volume of business, architects and builders have had a chance to try out new ideas and create new styles. The result has been what may be called, for lack of a better term, "Miami Modern."

Before getting into this topic further, let me hasten to say that all of the building is not being done in Miami Beach alone. Builders in the city of Miami Itself erected some \$15,215,000 worth of structures last year, including a large number of fine small homes for permanent residents. That fast growing northern suburb, Fort Lauderdale, accounted for \$4,906,000 worth of work, including some of the most attractive modern apartments and apartment

(Continued to page 183)



SMALL NEW HOTEL on Collins Avenue illustrates many new design features, such as projections over windows. L. M. Dixon, architect; Prufert Constr. Company, builders. Materials by Lindsley Lumber Company.



EVEN THE FILLING STATIONS, such as this one in Miami Beach, are done in colorful, modern style.



FAMED LINCOLN ROAD in Miami Beach has the most beautifully designed group of shops and stores of any street in the world. Above is the I. Miller store, with typical canopy treatment.

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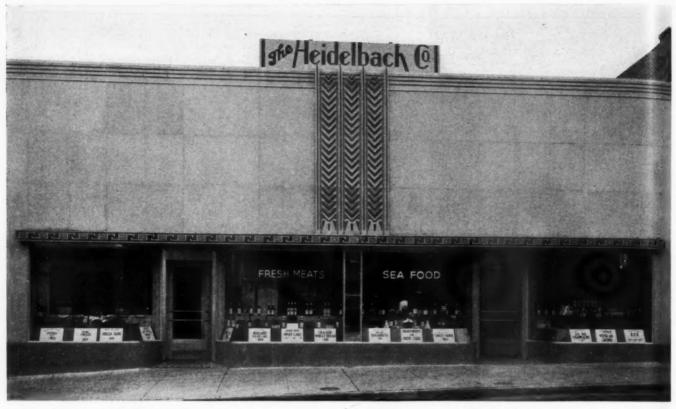
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ARCHITECTURAL CONCRETE SLABS in attractive colors feature the front of this meat store in Baltimore, Md., designed by J. R. Kennedy,

Flexibility Keynote of Modern Stores

How to build structures that keep in step with frequent tenant changes is told in 13 simple rules

By Jule Robert von Sternberg, R. A.



SIMPLE, flexible layout of a modern front in Ardmore, Pa., shopping center.

AILURE to provide for many possible types of tenancy seriously handicaps much modern store construction. For the modern store is one of the most rapidly changing of all building forms. Big and little improvements in its form and function within recent years have revolutionized its construction. Although highly profitable the building of stores for rent or sale requires a new set of building skills; building knowledge.

The chief cause of these changes has been the immense advances that have been made in modern selling. Stores were once very much alike-simple boxes with large

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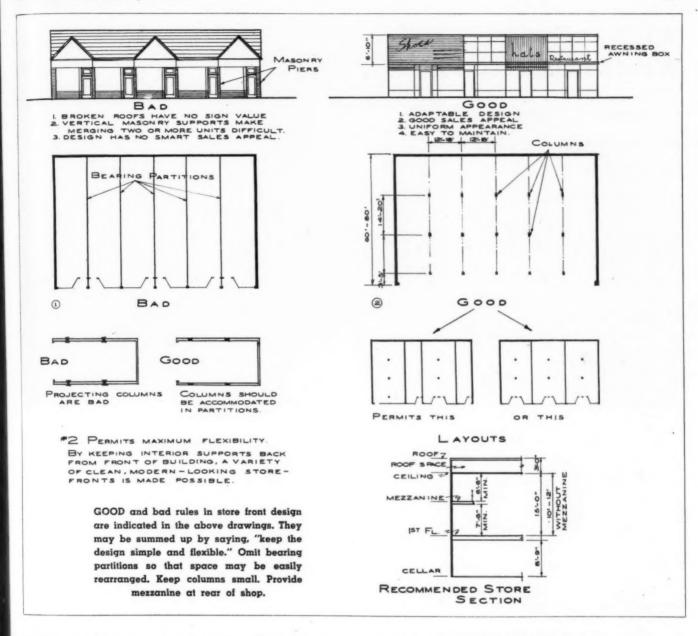
public windows.

Today, however, the shape, size, architecture and equipment of every type varies. As a result, the builder of a group of Main Street shops must keep them as flexible and adaptable as possible, to the end that a tenant may rent a large or small space; may install a high, or low bulkhead; may use much, or little, electricity; may build his own front, or use the existing front.

Building "flexible" stores is not difficult. Some few simple rules should be followed:

1. Avoid uneconomical store widths and lengths. In small cities, practical unit widths average 15 to 18 feet. Lengths average 60 to 80 feet. In larger cities, with more expensive property, widths average 12 to 15 feet, lengths 50 to 60 feet.

2. If possible, where two or more store units are planned, the building should be constructed with non-



bearing partitions separating the units. Use columns as supports so that the space may accommodate any standard width store. Columns should be located 14 to 20 feet on center in parallel rows running from front to back of the building. The distance between rows should be determined by store widths as described above.

3. Side walls of each unit should be flat and unbroken, to make the installation of wall fixtures and other store equipment easier. Avoid the use of pilasters, column and plumbing breaks wherever possible. Side walls should meet the ceiling at right angles. Avoid plaster coves as they complicate the installation of curtain walls over fixtures.

4. First floors should be a minimum of two inches above the sidewalk level. This will keep out rain, yet permits mounting by means of a slight pitch in the vestibule floor. Breaks in floor levels, like wall breaks are not advisable.

Breaks in floor levels, like wall breaks, are not advisable.
5. Ceilings should be flush and comparatively high for two reasons: (1) A high ceiling is better suited to a large store. (2) A 15 foot minimum ceiling permits the introduction of a service balcony in the rear of the store—a necessary addition in stores with large inventories, such as shoe stores; with complicated bookkeeping, such as credit stores; or with several departments, such as notion or department stores. Where balconies are not intended,

ten to twelve foot ceilings are sufficient.

6. Cellars should be dry, soundly built and with at least 8 foot ceilings. This permits their use as additional sales space, cooking, or storage space. Clothing stores, restaurants, furniture and radio stores are common basement users.

7. Cellar ceilings should have doubled joists on approximately 11 foot centers to provide for relocating cellar stairs for various tenants without ripping up the floor.

8. Roof space should be sized to accommodate future air conditioning and ventilating ducts. A 3 foot clear space above the ceiling permits easy installation of ducts, provides access for repairs, and permits installation of additional wiring, recessed lighting fixtures and sprinkler systems.

9. Cellar areas should not be located at the front of the building, in front of the store. They are dangerous, are slippery when wet and discourage window shopping. If possible, cellar entrances should be in the rear when alleys are available, or on a side street. If neither of these is possible, the entrance should be through the store.

10. Interior wall and ceiling finishes should be smooth, easily painted, papered or covered with other standard wall coverings. Floors should be smooth, well laid, and (Continued to page 196)

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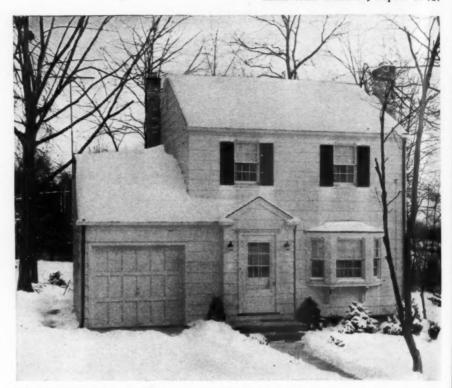
White Collarites WantLowUpkeep

So Concord Colony homes at Cedar Grove, N. J., sell quickly. Feature winter air conditioning

ANY of the buyers of Concord Colony homes at Cedar Grove, N. J., are white collar workers in nearby industrial and defense plants, including engineering and technical people. Builder B. V. Zamore reports that this class of buyer is particularly interested in low upkeep. With competitive conditions as they are, Zamore has thus had to tackle the tough problem of building houses that are low in first cost and also inexpensive to own.

Zamore has been insulating the houses with 4 inches of mineral wool in the ceiling and gets a tight wall construction through use of U. S. Gypsum's Gyplap sheathing with the V-joint. Over the Gyplap he lays 1 x 2 furring strips and 24" Certigrade red cedar shingles. Zamore has been featuring Superfex 24-hour air conditioning furnaces made by Perfection Stove Co. of Cleveland. In the 5-room house he used the Model 83, with bonnet capacity of 70,000 B.t.u.; and in the 6-room house, Model 100AE, with 95,000 B.t.u. bonnet capacity. Houses like the snow covered home above have been running under \$60 a year for fuel, a real contribution to low upkeep. This photograph was taken several days after a storm and there was no sign of melting snow on the roof, showing that the tight insulated construction had kept the heat inside.

Houses of this type can be carried by Cedar Grove buyers for about \$42 a month, including taxes, interest



SNOW DIDN'T MELT. Insulaton kept the heat inside this typical 5-room Concord Colony house, built by B. V. Zamore.

and amortization. Zamore sets a base price and then adds \$50 extra for a vestibule, \$35 for a bay window, \$160 for a fireplace or \$150 for a 9' x 12' porch. He uses power equipment to get the cost down, including a Stanley electric power saw and a DeVilbiss paint spray gun, using white lead and oil paint. Other products include U. S. G. 20-year guaranteed asphalt roof, Clark garage door, copper plumbing, full tile baths, double oak floors.

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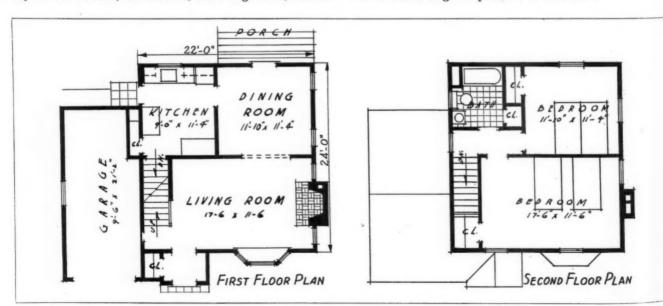
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door, copper plumbing, full tile baths, double oak floors. A house a week is Zamore's program for the coming year. In his advertising, which is prepared by United Service Advertising, of Newark, N. J., this theme is captioned "Stop Paying Rent—Start Real Living. Rents Go Higher and Higher but Not Monthly Charges on a Zamore Home.

"You not only obtain real tangible values, you receive security, freedom from rent increases, peace of mind that comes with being independent of landlords."



TYPICAL 5-ROOM PLAN used by Zamore has 22' x 24' foundation, attached garage, 17' 6" x 11' 6" living room.



THIS trim little onestory Seattle home was designed by Architect Edwin Doisen and built by Bernhard Dahl. Detail is clean-cut and generally well handled.

Northwest 5-Room Design in Brick, Cedar

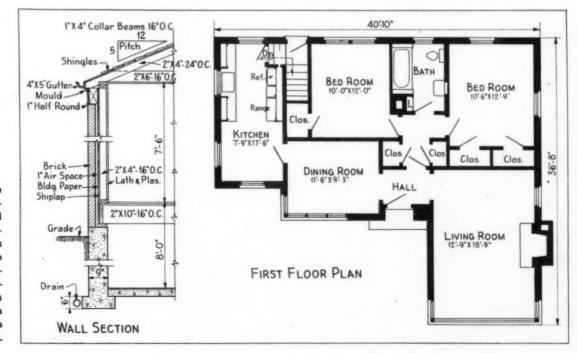
ROM the Pacific Northwest, there has been an increasing tendency toward the development of a style of home design which borrows many of the design and planning features of other sections of the country and combines them into a most livable and attractive structure. Above is shown an example of just such planning; it is built in Seattle, Wash., by Bernhard Dahl, and designed by Edwin Dofsen, architect. This five-room, rather extended layout has plenty of window area for good light and ventilation, a California-like modernization of Colonial detail, and efficiency of plan, with good storage area and separation of living, retiring and eating functions. The dining room can be used as a multi-purpose room since kitchen has plenty of space for dinette.

The exterior of durable materials has painted brick veneer on sidewalls with red cedar siding and shingles above. Hayworth winter air conditioning system is placed in the basement so that plenty of area is provided for knotty pine recreation room with open brick fireplace;

the plumbing fixtures used are Briggs Beautyware. The first floor plan, as detailed below, shows two arch-

The first floor plan, as detailed below, shows two archways on either side of the entrance hall leading to living and dining rooms. Also from it, there is a door connecting with the passageway between bedrooms and bath, with handy storage closets on both sides. This arrangement allows access directly to all parts of the house. The master bedroom has twin closets extending across one end, and a linen cabinet is worked in alongside the heating plant flue in the bath. Kitchen equipment is placed in an aisle-type arrangement for compactness and efficiency, with sink and built-in cabinets on the outside wall, and range and refrigerator opposite. Door leads to grade entrance and basement.

In the wall section, framing and foundation details are indicated; framing at the cornice shows application of fascia and wood gutter. Generally, the construction of this house has been planned for modern living at low maintenance cost.



FEATURES of the plan include breakfast space at one end of well lighted kitchen, plenty of closets including two off the entrance hall, unusual window treatment extending across end of living room and turning corners to give sunroom effect.

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LEFT: The den of the English type model home built by George B. Thatcher, North Hollywood, Calif., (shown opposite) features a redwood plank and beamed ceiling, corner fireplace of native stone (on opposite side from this view), plaid paper above paneled wainscot, leaded glass cabinet doors which repeat casements, and louvered door to living room.

Two California Homes with Many Salable Features

THE master bedroom in the Thatcher English style model has a group of attractive and salable built-ins in the dressing alcove. Wardrobes and drawer spaces flank the well lighted dressing table which also is provided with twin Lumiline lighting fixtures at the sides of the mirror as shown in view at left.

LEFT: The living room of another English type demonstration home (this one built by Severance of Burbank, Calif., and shown at the bottom of the facing page) also has many novel and attractive interior details—pine planking around the corner fireplace, glazed timber beams, wide horizontal board wainscot in hall beyond, cupboards and bookshelves.

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Wood

Bros.

LOS Angeles model home built by George B. Thatcher, furnished by Broadway Dept. Store.

GARAGE

MAIDS ROOM

IN THE San Fernando Valley section, which is one of the most active building areas around Los Angeles, a number of very interesting model homes are being built by operative builders as demonstration projects; naturally, under such competitive conditions, such homes are packed with novel and attractive features which add to their salability.

Two examples of the present trend are shown on this page, together with several interesting interiors appearing opposite. They are both single-floor designs in English type styling. They have attached garages, two baths, space for outdoor living, heater closets and service porches—all in line with the popular appeal of this section.

The house at the top of this page was built by George B. Thatcher of Studio City, Los Angeles; it is seven-room size and occupies a choice corner lot setting in Hollywood Country Club Estates, with low hills in the

BED ROOM
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BED ROOM
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LIVING ROOM
11-0"X14-0"

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TERRACE
2016 X 151-07

BED ROOM
181-07 X 151-07

Clos.

Wardrobe
Lin.

Wardrobe
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Wardrobe
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Bath
Furn.

Bath
Entry
Books

Clos.

background. The grounds are plotted to allow for a badminton court behind the garage, this being another requisite in small home building in suburban Los Angeles. Also, in line with local practice is the use of wallpaper in all rooms except the living room, floral designs having been chosen mostly, suggestive of the small home to be found along the English countryside. Even the entry hall and breakfast nook have floral pattern wallpaper. Other interesting features of interior planning are the built-in dressing tables, the arrangement of wardrobe space, and the built-in window box in the dining room which is lined and drained to the outside by a copper tube.

Stucco is used over frame on the exterior, with redwood half timbering front and sides, and a partial base of stone veneer set on a reinforced concrete foundation. (Continued to page 198)

ANOTHER typical
California model home
built in North Hollywood by J. Byron
Severance and furnished by Barker
Bros. Floor plan is
immediately above.



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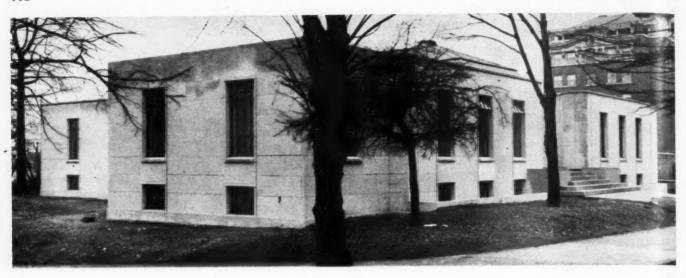
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Church Office Built on Old Foundation

HE entirely fireproof Diocesan Center building erected in Seattle by W. A. Slate, was designed by Architects Thirty & Shay to utilize the foundation of an existing old house, which was incorporated into the new building. Architectural requirements were the housing of three separate activities consisting of the Chancery office headquarters for the Bishop; quarters for charity organizations; newspaper offices.

The entire building is made of reinforced concrete with hollow tile partitions. Concrete exterior walls, which are furred on the inside with tile, are finished

with 2-inch thick Wilkenson cut stone.

In order to give flexibility to the entire office arrangement, so that it may be subject to alteration without affecting the structural part of the building, an isolated support was provided. Basement rooms for general use have a double slab with two-inch cork insulation between. Interior basement partitions are constructed of four-inch runner tile, left exposed. Interior partitions upstairs are made of 2 x 3 studs with 3-inch Thermax insulation between, surfaced with 3/8-inch plaster board so as to allow flexibility for future changes. Basement floors and the first floor are covered with flexible asphalt tile, and floors in the chancery wing rooms are covered with half-inch cork tile, excepting the chancery reception room and vestibule, which are finished with random slate. Walls in some cases are covered with cork and all of the ceilings are finished with acoustical material, Johns-Manville Sanacoustic being used in the larger areas.

BASEMENT PLAN



Prefabricated Houses Finally "Arrive"

Defense Housing Orders Furnish Needed Volume

THE STIMULUS of quantity orders from the government for defense housing is at last permitting the pioneers of the prefabricated house industry really to demonstrate what they can do. Having passed through the experimental stages, several house building shops were ready when the housing administrators at Washington called for bids for prefabricated, demountable houses for the Indian Head, Maryland, defense

housing project.

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Homes needed at Indian Head total 650. The Federal Building Administration announced on March 15 that it had already placed orders with five different concerns for a total of 220 of these prefabricated houses as follows: National Homes Corp., Lafayette, Ind., 50 houses at \$2,966 each; Standard House Corp., Chicago, 50 houses at \$2,831 each; Allied Housing Associates, Inc., Langhorne, Pa., 50 houses at \$2,692 each; Home Building Corp., Kansas City, Mo., 50 houses totaling \$127,000; and E. F. Hauserman Co., Cleveland, O., 20 houses totaling \$61,752. This Indian Head, Maryland, prefabricated house village is to accommodate industrial workers employed at the new Navy powder factory.

Douglas Fir Plywood panels have proved very serviceable for prefabricated house construction. Following in the main the details of construction and assembly worked out by the Douglas Fir Plywood Association for "Dri-Bilt," a number of concerns in addition to those mentioned above have set up assembly benches, have put out catalogs and circulars illustrating standardized plans and are delivering the shop-fabricated house walls, floors, roofs and partitions in panel form by motor truck to the

building sites over a considerable area.

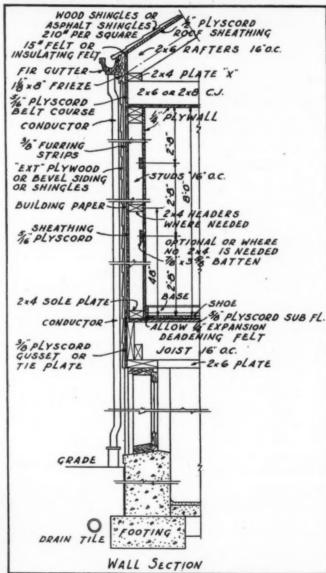
The Gunnison Housing Corp., New Albany, Ind., of which Mr. Foster Gunnison is the moving spirit, has literally gone through hell and high water (on the banks of the Ohio River) for the prefabrication ideal since 1930. He now has what is said to be "the largest housing plant in America," a truly impressive factory layout; and he offers a large selection of homes ranging from small and simple to large and elaborate.

The Pease Woodwork Company, Inc., Cincinnati, O., offering "Peaseway houses" is another concern set up in



Electric handsaw trims off gable end assembly in National Homes shop; later to be set in place as one piece.





D. F. P. "Dri-Bilt" details used by many of the successful prefabricated house companies; ABOVE, Goodwillie-Green Box Company delivers a truck load of house to the erection site.

a big way to manufacture house walls and room-sized panels in straight line production. Plywood enters largely in the shop-fabrication, with individualized exteriors added after assembly on the job, using any materials specified, such as red cedar shingles, asbestos siding or brick veneer. A 16 page plan book in full colors illustrates the Peaseway line.

(Continued to page 180)

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SERVICE TO READERS

EACH ITEM in this department is numbered for convenience of readers. Please use the coupon on page 126 for requesting further product information or new catalogs. Mail coupon to American Builder Reader Service, 105 W. Adams St., Chicago; or write direct to manufacturers at addresses given, mentioning your profession, occupation or business connection with building industry.

WHAT'S NEW IN BUILDING MATERIALS

AB445 The old-fashioned weather vane, so long a tradition on the American scene, is quite as much in style as ever, according to the Milcor Steel Co., Milwaukee. So, it has designed three rugged models for installations on homes, garages, flagpoles, playhouses and other buildings. No. 1 screws into a flat end

NO. 2 NO. 2

THREE new models Milcor weather vane.

flange and is made primarily for mounting on flagpoles or projections with a flat surface. It stands 14 inches high. The No. 2 which stands 18 inches high and the No. 3 which is 24 inches high, are made for installation on ridge or hip ends and can be cut to accommodate any roof pitch. All Milcor weather vanes are equipped with solid steel shafts floating on a ball bearing pivot and lubricated with grease..

AB446 Protex weather strips are presented in a 20 page portfolio known as, "The Blue Book of Weatherstrips." Large scale, well drawn details show how every important type of window and door is handled. A full line of edgings, bindings, nosings and brass thresholds is illustrated. Also, details of the Protex winter panes, a storm sash application, set in rubber and fastened directly to the regular window sash.—Protex Weatherstrip Mfg. Co., Chicago.

AB447 Two-coat painting is discussed by The Eagle-Picher Lead Co., Cincinnati, in a meaty booklet of 12 pages under the title, "Quick Facts About Two Coat Painting," by F. L. Chinery, chief chemist of the White Lead Division. It is a discussion addressed particularly to painters and decorators and of interest to architects and builders.

AB448 "Tracy Cabinet Sinks and Cabinet Tops For Modern Kitchens" is a valuable 12 page reprint from the current "Sweet's" offered by Tracy Mfg. Co., 3125 Preble Ave., Pittsburgh. It illustrates construction details for stainless steel and linoleum with special reference to modern home kitchens. Tracy custom-built cabinet sinks and tops for schools, hospitals, institutions, etc., are also covered.

AB449 Steelmaster shingles, manufactured by the Tennessee Coal, Iron and Railroad Co., Birmingham, Ala., a division of United States Steel, are presented in a new two-color folder. Steelmaster shingles are galvanized sheet steel sized for eighty pieces to cover a square.

AB450 Bruce streamline factory-finished hardwood floors are attractively illustrated in their full natural colors in a new 6 page brochure, "Floors That Stay Young." This flooring is completely finished at the Bruce plant, even to waxing and polishing. It is ready to use as soon as laid. This is strip flooring in red oak, white oak, beech and maple. Sizes: 25/32" x 3½"; ½" x 2½"; and ½" x 2". Each comes in two grades, standard and prime.—E. L. Bruce Co., Memphis, Tenn.

AB451 Vento's new champion basely new method of operation. It is virtually two windows in one in that it can be tilted in at the top to give the highly desirable



VENTO'S new champion basement window.

indirect ventilation, or if required the ventilator can be reversed and hooked to the ceiling to give a top hinged window. Ventilator can easily be removed from the frame for ease in glazing or any other purpose. Outside frame is of heavy channel cold formed section. Ventilator insert is made of hot rolled section, 2-point weathering contact, and arranged for puttyless glazing. This window is stocked by dealers in most centers.—Vento Steel Products Co., Muskegon, Mich.

AB452 "Racolet" junction boxes for electric wiring are catalogued and priced in a 16 page data sheet from the All-Steel-Equip Co., Inc., Aurora, Ill. These are made of malleable iron and come in every needed size and style to meet all electric wiring requirements.

AB453 "The Nu-Wood Color Harmonizer" is a deluxe color brochure of 32 pages illustrating many actual examples of Nu-Wood walls and ceilings. An ingenious cut out section offers six color scheme changes for wainscots combined with any one of six changes of upper side walls and six changes for ceiling treatment. The rooms analyzed in this way are dining room, bedroom, game room, living room, library and office. It is real fun to work this color and style selector.—Wood Conversion Co., St. Paul, Minn.

AB454 Weatherite mason's lime and how to produce watertight masonry are covered in a little vest-pocket handbook of 16 pages by the Woodville Lime Products Co., Toledo, O. Good information from this company is also offered in architectural file form, one folder on Blubag superlime plaster and another on Blubag Doloroc stucco finishes.

AB455 Fluresit waterproofing and building maintenance products are featured in a new three-color folder arranged for convenient reference. Fluresit Tricoseal waterproofing for mild seepage and dampness and Fluroseal for severe waterproofing problems are well known products of the American Fluresit Co., Inc., Cincinnati, O. A third waterproofing material featured is Fluresit Quickset, a rapid hardening waterproofing compound. It is used for instantly stopping mild or severe water pressure or running seepage streams at the point of penetration. It becomes flint hard in less than 5 minutes. It is a dry, powdered material ready for use except for the addition of water.

AB456 Armstrong's Temlok in attractive colors for walls and ceilings of a decorative character is illustrated in a 12 page color brochure from the Armstrong Cork Co., Lancaster, Pa. Double insulation value, by combining this colorful interior plank and paneling material with Temseal sheathing, is suggested and detailed. Armstrong's Monowall, a factory finished hardened wood fibre board for bathrooms and kitchens, is also illustrated. A companion brochure of 8 pages under the title, "Modern Walls at Low Cost," is devoted entirely to Monowall.

Readers Service Department Continued to Page 122



Rō-Way OVERHEAD TYPE DOORS

-have kept pace with modern motor car developments. These quiet, trouble-free doors are really designed and built to enable a car owner to completely forget the mechanical parts just as he is able to do in operating his fine car. When he takes the car out or returns it to the garage, his Ro-Way Doors may be depended upon, day in and day out, to afford maximum protection with a minimum of at-

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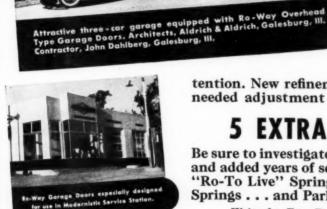
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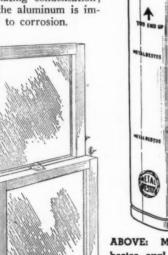
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WHAT'S NEW IN BUILDING MATERIALS

AB457 Metalbestos gas vent and flue pipe, manufactured by the Williams-Wallace Co., San Francisco, consists of an aluminum pipe placed within a galvanized steel casing which is one inch larger in diameter than the aluminum pipe. The two are held in centered positions by vitrified asbestos spacer rings and a one-

half inch insulating air space is thus provided completely around the aluminum pipe. This keeps the burned gases hot, eliminating condensation; and the aluminum is immune to corrosion.



ABOVE: Metalbestos oval flue pipe with air insulated walls.

TO LEFT: sash hung with National balances.

AB458 Permitting window sash to be opened full height and eliminating any need for pulleys, weights, sash cords and box frame, this remarkable new National sash balance, recently introduced by National Lock Co., Rockford, Ill., comes pre-adjusted and ready for quick, easy installation. The balance is completely concealed inside the sash, presents a trim dust-collecting eliminates appearance. pockets and offers weather-tightness. Installation consists of simply hooking the stainless steel cable to a button which is screwed to the window frame. Oil impregnated wheels make the cables self-lubricating. No stops are required. Units are supplied to balance specific window sizes and weights. Complete details of recommended installations for the workmen and architects' drawings and specifications are

AB459 Roofloy lead roofing, a new product of Revere Copper and Brass Inc., New York City, is presented in a 20 page catalogue reprinted from the current "Sweet's." Roofloy is an improved type of roofing sheet lead for which the advantages of lighter weight, greater tensile strength, lower installation cost and reduced tendency to creep are claimed. It weighs two pounds per square foot. Clearly drawn details for standing seam and batten seam roofing are included along with installation photographs and complete specifications.

AB460 Catalog No. 37 of the Indiana, Pa., is an illustrated book of 44 pages showing a very complete line of cast iron building specialties including fireplace dampers, ash dumps, doors, coal chutes, drainage traps, gratings, covers, guards, grate bars, heating stoves, etc.

AB461 "Guide to Efficient Insulation" is a new 20 page data sheet from Kimberly-Clark Corp., Neenah, Wis., on the general subject of building insulation and with particular reference to Kimsul. Large clear photographs and drawings show how to handle difficult installations and fuel savings for various thicknesses of insulation are helpfully diagrammed.

AB462 Catalog K from The Central Foundry Co., 386 Fourth Ave., New York City, is a book of 136 pages covering the complete line of "Nuhub" cast iron soil pipe and fittings. An 18 page appendix gives "Tables of Compound Discounts" reduced to simple net compounds computed to five decimal places. The table covers discounts ranging from 15 per cent up to 91½ per cent with supplementary discounts ranging from 2½ per cent to 10- 10- 10- 7½ per cent—a feature that will save a lot of figuring on many things besides cast iron soil pipes!

AB463 Wingfoot Rubber Flooring and Wall Rubber is the title of a new brochure, from the Goodyear Tire & Rubber Co., Inc., Akron, O., illustrating these products for commercial buildings, public buildings and homes. The range of colors in which these floor and wall coverings are offered allows the architect and builder to devise countless designs. Border and feature strips increase the number of possible combinations. The colors retain their life through years of service and do not "walk off."

AB464 "Dress Up Your Windows With Aldura Aluminum Screen Cloth" is the title of an attractive little folder issued by the New York Wire Cloth Co., 500 Fifth Ave., New York City. Aldura is non-rusting, self-cleaning and weathers attractively. It is woven 16 wires to the inch and comes in widths 18 inches to 48 inches.

AB465 The Master no-draft sash balance, developed by the Master Metal Strip Service, Inc., 1720 N. Kilbourn Ave., Chicago, is illustrated and explained in an attractive 6 page folder in black, red and aluminum. It consists of a sash balancing spring in an aluminum alloy housing which acts as a positive weatherstrip. Adaptable to both new and old windows.

AB466 Ludowici early American shingle tiles are featured in an attractive folder from Ludowici-Celadon Co., 104 S. Michigan Ave., Chicago. This recently developed shingle tile (burned clay) has the characteristics of the shakes used on early American homes. Color is soft grayish green suggesting moss and lichens on the shaded sides of the roof.

AB467 "Home Protection" is the title of a deluxe 24 page portfolio from the Red Cedar Shingle Bureau, Seattle, Wash. It presents a number of interesting small house designs and gives suggestions for old home modernizing. The right and wrong way of shingling is compared and "Six Steps In Over Roofing" are illustrated.

AB468 "More Roof Value For Your Money" is an important little book of 20 pages describing the research which The Philip Carey Co, Lockland, O., has back of its "Asqu" asphalt roofing products. Extra saturation of asphalt and what it means for long life roofings are explained.

AB469 "Shadowline" aluminized fir gutters, as produced by the Long Fir Gutter Co., Cadiz, O., are featured in an attractive 4 page data sheet. Details show how wood gutters are mittered at the corners and connected to metal downspouts.

AB470 Wernco metal mouldings of aluminum, brass and stainless steel are attractively illustrated in a handbook of 24 pages from R. D. Werner Co., Inc., 21 E. 30th St., New York City. This is a valuable price list and specification book for builders and dealers.

AB471 Yankee fiber tile wall boards in attractive colors, produced by Yankee Fiber Tile Mfg. Co., 3222 E. Jefferson Ave., Detroit, are offered in a well styled color folder illustrating numerous uses. Entitled, "Modern Luxury Walls at Low Cost," illustrations are presented showing results in a breakfast room, a bathroom, a food market. A wide color range is reproduced suggesting many striking modern effects.

Readers Service Department Continued to Page 124

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Chrysler Engineering Has Produced Practical Heating and Cooling at Low Cost

Sales Appeal!-Now you can offer year-'round air conditioning for medium-priced homes!

Time-Tested Products-The Airtemp heating and cooling unit is a combination of an air-conditioning furnace now in use in thousands of homes and a hermetically-sealed cooling unit used in stores, offices and restaurants for years.

Cooling Costs Little-On a 20-year, F. H. A. mortgage the matched cooling unit adds as little as \$2.69 to monthly payments.

Airtemp Makes a Complete Line - This

combination unit is typical of the Chrysler engineering in all Airtemp equipment-furnaces for all fuels, from 70,000 to 200,000 B. T. U. output.

Prices Competitive-Why not put equipment in your homes which bears a name nationally famous for engineering leadership and quality manufacture? It helps you sell yet costs no more.

Mail the Coupon-for complete information about the combination unit and the Airtemp line.

Dealers! - Airtemp has an unusual, profit-making proposition for you. Mail coupon for details.



AIRTEMP DIVISION, CHRYSLER CORPORATION Department F, Dayton, Ohio				ION	
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Combination Dealer Unit and the Airtemp line. Builder []

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SERVICE TO READERS

EACH ITEM in this department is numbered for convenience of readers. Please use coupon on page 126 for requesting further product information or new catalogs. Mail coupon to American Builder Reader Service, 105 W. Adams St., Chicago: or write direct to these manufacturers mentioning your profession, occupation or connection with building industry.

NEW MODELS. POWER EQUIPMENT & TOOLS

AB472 The Markwell screen tack-er is a useful device for securely attaching screen wire to windows and doors. Can be obtained as a free loan under company's current offer or can be

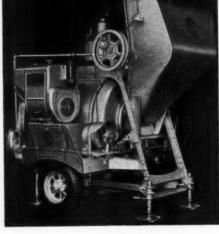
AB474 The extensive line of CMC trailer mixers (Construction Machinery Co., Waterloo, Ia.) has been augmented by the new model shown here; it is equipped with V Type air cooled engine. This compact unit has all the proven features of portability, service-ability, and long life. The air cooled engine eliminates cold weather hazards.





in utility.

ABOVE, the Markell screen tacker; to left, the Markwell insulation tacker.



NEW fast action CMC trailer mixers

tried out on approval by writing A. Markwell Mfg. Co., Inc., 200 Hudson St., New York City. The new Markwell insulation tacker, also illustrated, has won acceptance for speedy fastening of all types of insulation. Its one-hand operation permits use of the other hand to hold insulation

AB473 The new "Whiz" electric tool, developed by Paramount Products Co., 48 W. 48th St., New York City, weighs 3½ pounds, comes in standard model and two-speed model utilizing up to 200 different accessories.



AB475 The Reid-Way Corp., Cedar Rapids, Ia., is now offering the industry the Reid-Way "8". the floor sander with the exclusive feature of "Only One Moving Part." The motor itself forms the sanding drum, and this is the only part in action. Another exclusive feature of the Reid-Way is that it works directly to the quarter-round on both sides of the machine.



AB476 American Standard floor sanders, Models 8 and 12, developed by The American Floor Surfacing Machine Co., Toledo, O., are effectively illustrated and described in a new 6 page data sheet. This is so completely detailed that it is in itself a thorough education in flooring sanding equipment. These machines are available in either electric drive or gasoline engine drive. A special bulletin is included on the American gasoline powered floor sanders which will be particularly interesting on rush construction jobs for national defense, remote from power lines. The gasoline engine equipment is interchangeable with electric motor.

AB477 "Porter-Cablegram, The Floor Contractors' Gossip Sheet" has been brought out by the Porter-Cable Machine Co., Syracuse, N. Y., and those interested should get on the mailing list. It is to be issued from time to time for the benefit of some 15,000 floor men in North and South America. Volume I, No. 1, recently issued, is a four page newspaper 11½ x 16 inches. S. S. Mellor is the editor and some mighty interesting features are launched that are bound to appeal to floor surfacing men. "Getting This Floor Business at a Profit," a leading article in this first issue, will be worth real money to many readers.

AB478 Fir-Tex absorptive form liner, a product of Fir-Tex, Inc., Porter Bldg., Portland, Ore., is the subject of a 4 page illustrated data sheet which presents valuable test data. The use of this form liner produces a smooth, hard surface on concrete, eliminating pits. The fiber board liner produces a finer textured surface with absence of surface voids, less crazing and greater hardness and durability. By absorbing air bubbles and excess water, the Fir-Tex liner produces a case hardened

AB479 Babcock spruce ladders are standard equipment with many contractors and builders. A very extensive line is illustrated, described and priced in an 8 page folder from W. W. Babcock Co., Bath, N. Y.

AB480 Mall contractors' equipment is featured in a new 8 page catalog from the Mall Tool Co., 7740 S. Chicago Ave., Chicago. Included are concrete vibrators, surfacers, drills, saws, etc., powered by gas engines, compressed air or

AB481 Black & Decker 1941 catalog, contains 60 pages, fully illustrates the complete line of 132 portable electric tools. A pioneer in the field of portable electric tools, the Black & Decker Mfg. Co., Towson, Md., demonstrates in this new extensive catalog that it is right abreast of all modern developments.

AB482 The Jackson concrete brick machine, developed by Jackson & Church Co., Saginaw, Mich, together with its products are presented in a new two-color 6 page data sheet.

Readers Service Department Continued to Page 126

FOR QUICK, CONVENIENT SERVICE, USE COUPON, PAGE 126

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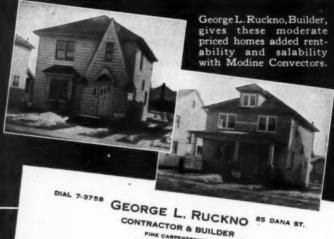
"MODINE CONVECTOR

heating has given more satisfactory results than any other type...

There's no mistaking the greater sales appeal of Modine Convector heated homes. You have Mr. George L. Ruckno's word for that. He builds moderate price houses, in groups of six or twelve, in Kingston and Forty Fort, Pa. And he speaks from long experience.

Having "used two or three different types of heating in the past" he now uses Modine. Why? Because his "clients have shown a decided preference" for Modine's modern smartness... beauty that's distinctive yet unobtrusive...space saving that combines convenience with building economy. All the added "luxuries" and greater comfort are theirs with Modine copper concealed radiation and a hot water or steam system. With Modine's standardization and lower cost installation your cost approximates that of a hot air blower system.

MODINE MANUFACTURING COMPANY 1701 RACINE ST. RACINE, WISCONSIN



CONTRACTOR & BUILDER

FINE CARPENTERING FORTY FORT, PENNA. Modine Manufacturing Company 1701 Racine Street Racine, Wisconsin

March 18, 1941

Gentlemen:

We have been building homes in Kingston and Forty Fort in groups of six and twelve in the moderate price class and have used two or three different types of heating in the past. We have Modine convectors has given more satisfactory results than other types.

Our clients have shown a decided preference for this type of heating and have found that with Modine recessed convectors, the arrangement of drapes is simplified, as well as the placing of furniture. They also comment on the attractive appearance of the finished installation.

We ourselves, are more than pleased with the ease in which *roughing in* can be done and the way in which the convectors can be decorated, and give us the final results we desire.



Modine Convector showing copper heating unit as concealed behind Panel Front Recessed Type enclosure.



Look in your phone book for Modine representative's name—"Where to Buy It" section under Heating Apparatus

Write for Literature

MANUALLY REMOVABLE ENCLOSURE FRONT



NO BOLTS, NO SCREWS NO TOOLS TO USE

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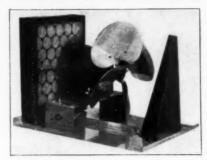
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SERVICE TO READERS

EACH ITEM in this department is numbered for convenience of readers. Please use the coupon on this page for requesting further product information or new catalogs. Mail coupon to American Builder Reader Service. 105 W. Adams St., Chicago; or write direct to these manufacturers mentioning your profession, occupation or connection with building industry.

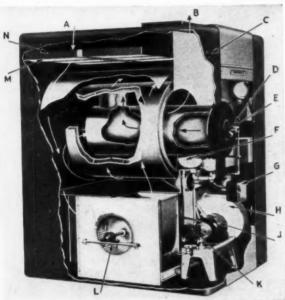
HEATING AND AIR CONDITIONING

AB483 Illustrated is the largest of four new furnaces which Norge Heating and Ventilating Division, Detroit, has developed to provide modern heat and air conditioning at low cost for homes in the \$2,000-\$9,000 class. All are of the warm air type and all burn oil. Key to phantom view: A, cold air inlet; B, warm air outlet; C, "change filter" indicator; D, electric ignition; E, oil nozzle; F. humidifier: G, automatic safety controls; H, mechanical draft; J, single motor; K, oil pressure pump; L, blower; M, safety filter by-pass; N, air filters.



WAYNE air booster and conditioner unit for furnaces.

AB484 Wayne Automatic Relay Co., Fort Wayne, Ind., offers a combination air booster and conditioner unit. Normal gravity flow heating plants circulate only 11/2 to 2 times per hour, but by adding this simple assembly a truly even heating temperature may be had regardless of the distance the rooms might be how long or flat the duct-



NEW low-priced Norge air conditioner.

from the heating plant or work might be. The two speed motor fan drives air through a filter and cleans the air as circulated. With a booster the heating plant is operated at 150-300 degrees instead of 400-600 degrees as in gravity systems. A mercury tube thermostatic control makes it automatic.

AB485 "Byers Wrought Iron for Radiant Heating Installations" is a technical bulletin of 44 pages prepared by the Engineering Service Dept., A. M. Byers Co., Pittsburgh. A previous bulletin on this subject was put out by Byers about three years ago. Rapid developments within the last few months have made necessary this completely re-written and revised study.

AB486 The Superfex "gas saver" burning furnace for small homes is attractively featured in a new 4 page data sheet. This is one of the extensive line of heating plants developed by Perfection Stove Co., Cleveland, O. This model is a fuel saver and a space saver occupying only approximately four square feet of floor space.

AB487 Quiet May issues new architects and builders manual. A book of 20 pages entitled, "All Lines Point to Quiet May." It is a catalog of the air conditioners, oil furnaces and oil burners manufactured by The May Oil Burner Corp., Baltimore, Md.

AB488 The Zephair completely automatic g as furnace, offered by the XXth Century Heating and Ventilating Co., Akron, O., is attractively illustrated in a new two-color 4 page data

AB489 Two new Modine unit heater catalogs have been issued by Modine Mfg. Co., Racine, Wis. Catalog No. 140E, presenting horizontal delivery unit heaters, is an illustrated book of 32 pages. The other catalog, No. 140C, is devoted to vertical delivery unit heaters and is a 16 page data sheet. These unit heaters are particularly useful for industrial

AB490 Reznor gas-fired suspended unit heaters of the fan, blower and duct types are presented in a new 12 page catalog, No. U41, from the Reznor Mfg. Co., Mercer, Pa. Each type of unit is available in 5 different capacities ranging from an input of 55,000 B.T.U. per hour to an input of 200,000 B.T.U. per hour. Fully illustrated with drawings and photographs which show the important construction features of various types of units.

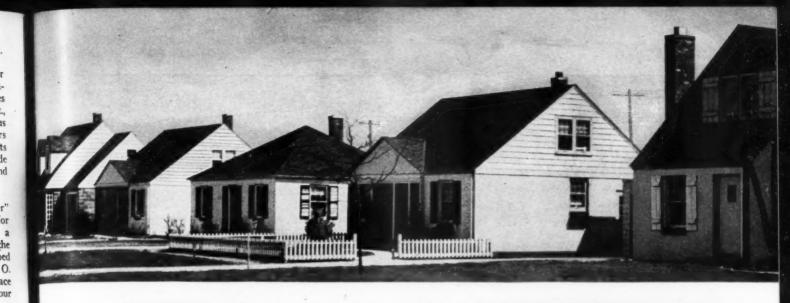
AB491 Chrysler's Airtemp heating systems are presented in a series of 4 page circulars attractively illustrated. One shows the Airtemp oil-fired boiler, Model OS-30; another features the new Airtemp winter air conditioner, and a third, the Airtemp all-steel furnace, an economy heating unit—Airtemp Div. Chrysler Corp., Dayton, O.

AB492 "Rexoil Accelerated Heat Coordinated and Certified" is the title of an impressive 30 page handbook on oil heating including the manufacture, design details and installation procedure of the Rexoil burners, boiler burner units and air conditioners that are now included in the line of this pioneer oil burner equipment manufacturer.—Reih Rexoil, Inc., Buffalo, N.Y.

CLIP AND MAIL TO CHICAGO

Reader Service Department (April, 1941) American Builder, 105 W. Adams St., Chicago, Ill. Please send me additional information on the following product items, or the catalogs, listed in this department: Street City State. OCCUPATION*

*Please note that occupation must be stated if full service is to be given



How §600 Saved with JANITROL heat in one of America's Finest Home Projects

Area X, under stairway, contains entire heating

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R. C. Dewey of Buffalo, New York, has realized the hope of a lifetime in the building business. He can now deliver to a new home buyer about \$600 greater living space and equipment values than was possible before the development of his new type homes.

Dewey now puts into these beautiful small homes spaciousness, comfort and conveniences heretofore possible only in homes of larger size at greater cost. He has set a standard of "More home for the money" that builders throughout the land can well imitate both for quick sale and big value to the home owner. They are small homes but of quality and workmanship found generally in high-priced homes only.

Entirely New Architectural Conception Really Gives "More Home for the Money"

"It was Gas Fired Janitrol Heat," says Mr. Dewey, "that made that development possible." The Janitrol Unit, not much bigger than a steamer trunk, is tucked into a small closet under the stairway. Right there we completely eliminate all need for spacewasting heavy furnaces and fuel storage. By a new method of air circulation Dewey eliminates great amounts of pipe and conduit work. The heat in these homes is astonishingly even and uniform from floor to ceiling, from inner to outer wall. Eliminating basements saved \$500. Lower furnace and

installation costs saved \$100. That money went into more usable room, a model little laundry and other devices, Architecturally sound, beautifully constructed, these homes have really set a pattern for the small home builders of America.

Use the Years of Heating Experience That Made These Homes Possible

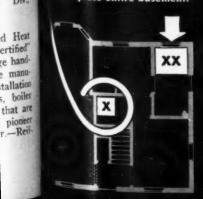
The heating unit around which the architects designed and Mr. Dewey built these homes was the result of years of spaceheating experience. Trained men with benefit of that experience are available to builders or owners who build where gas for heating is available. Wire, phone or write for consultation with a Surface Combustion Heating Engineer. He will gladly advise you, whether your project is large or small, in home or commercial heating.

SURFACE COMBUSTION CORPORATION, TOLEDO, OHIO



plant where basement stairway used to be.

Area XX contains laundry and is only space required to replace entire basement.





A sensational new design. Deeply anchored shank holds siding with bulldog grip. Checkered head holds paint neatly—eliminates shedding. And they're Zinclad. Positively rustproof!



Hot-dipped in pure zinc! Carrying a heavy protective coating of pure zinc—thick and uniform. Will not rust or rot wood siding.

NO STAINS

No rust . . . means no rust-stains leaking down on painted wood siding. Maze Zinclad Wood Siding Stays provide permanent beauty in wood siding.

NO "POPPING OUT"

Deep anchor rings on the shank of Zinclad Stays hold wood siding fast—even the popular wide wood siding remains snug and trim when laid with these new stays. Nails do not work out.

NO "SHEDDING" OF PAINT

A checkered head—an exclusive Maze feature—provides a perfect bond for paint. Paint will not shed, marring appearance of wood siding.

Write for free samples and literature on Maze Zinclad Wood Siding Stays. There's a Zinclad nail for every purpose . . . wood

for every purpose . . . wood shingles, metal roofing, asphalt shingles, asbestos shingles, etc.



ON & OFF the RECORD

Views and Comments

by Structor

HATS OFF: Chrysler Corporation's recent advertisement, "Hats Off to Men of Steel," puts the spotlight on the superb job the building industry has done and is doing in defense work. When the Army or Navy or private industry wants something done well and **done in a hurry**, they call in men who can get results without waste motion. In this case it was Albert Kahn, architect, and O. W. Burke, general contractor.

The building industry gets kicked around and criticised by all sorts of people for its inefficiency so it's pleasing for a change to have an outfit like Chrysler paying tribute to the builders who in 70 days, through rain, sleet and snow, transformed a Michigan farm into a huge tank factory.

The Bethlehem Steel Company raised over 6,500 tons of steel in this period in constructing the quarter-mile long and 500 ft. wide building. Throughout the nation hard-driving, efficient, experienced building men are hanging up new records in defense construction, defense housing and in private building. It's a record the industry can be proud of.

Although the emphasis as far as housing is concerned has been on large-scale defense housing, the actual facts are it is private home building performed in thousands of widely spread communities throughout the nation that is accounting for the vast bulk of the present home building increase.

The number of government planned or financed housing units to be built this year may reach 50,000 or 60,000. This would be remarkable. Yet it's less than 10 per cent of the expected national total of 650,000.

CHOICE WORDS—A few choice words are all I can allow to describe the A.F.L. Electrical Workers Union in whose behalf the strike was called last month which fied up the Wright Field, Ohio, Army Air Corps Project—simply because four C.I.O. electricians were employed by a New York subcontractor. This union is the most high-handed, arbitrary, unreasonable and close to a racketeer set-up of any in the country.

In New York and Chicago it has achieved a particularly unsavory reputation and holds a dubious record for imposing the shortest hours, most restrictions on output and least regard for the progress of the job. The Wright Field tie-up caused the intervention of the War Department for the first time, and moved even the President to denounce the strike.

This strike against the government's defense program had nothing to do with wages, hours, working conditions or the right of union labor to be employed. It was simply the high-handed, arbitrary and, I believe, illegal attempt of a little group of electrical dictators to tell the government that it cannot employ members of another union or anyone else this group does not approve.

Surely the federal government must take a stand against this form of labor monopoly. Or will it have to resort to the practice often found necessary by private contractors of "slipping" somebody something to lay off?

6-HOUR DAY ON THE FARM—Home building is as seasonal as farming, and it is just as unsound to set a fixed work period for home building as it would be try to establish a 6-hour work day on the farm. It just won't work. The forces of nature are "agin" it.

The C.I.O. coal miners' approach to this subject may suggest a solution: they have been asking a 200-day minimum work year rather than a 30-hour week. That's because coal mining like farming or home building, is a seasonal operation. The building industry might give some thought to a similar annual guarantee. If a building worker could be assured a minimum of 1,800 hours of work a year (equivalent to 225 8-hour days of 300 6-hour days) at \$1 an hour, he might not be so concerned about the fixed union work day restrictions that complicate building operations.

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SPEAKING OF COLOR—Our four-color insert in this issue calls to mind the story about the builder who bought a new "color-styled" car, and was so uplifted he offered a ride to the first girl he saw on the street. As the car came to the first intersection he asked her to tell him the color of the traffic lights. "You see, I'm color blind," he said.

"You sho is, honey," she replied in a husky voice. "Ah knows yo all's color blind!"

BIRDSEYE BRAG—Three thousand miles is a lot of territory to cover by car, as I did last month to get a quick birdseye picture of what American Builder readers are doing in important cities of the Southeast. The vivid impression punched home was the vast impact of national defense on building. In Charleston, a city of 71,000, more than 2,000 houses, public and private, are under way. Builder L. D. Long there has set a goal of 300 houses in 300 days, with a large thermometer in front of his office recording progress. He is also building a defense housing project. Savannah and Jacksonville are booming; Columbia looks like an army camp, with its streets full of soldiers and not a house available for rent. Builders, lumbermen and material dealers are busy on all kinds of work, in spite of higher prices and some material shortages. Mushroom communities are springing up around great new army camp centers. Certainly, the South is in this war.

The Carolinas, Georgia and Florida are not only booming as a result of the huge defense projects scattered all over these states, but they are feeling the effect of new industries and growth. This is a land with a future, and building men are playing an important part in its development.

AMAZING MIAMI—Of course, the wonder city of the Southeast is Miami and its flashy, flourishing offspring Miami Beach. The glistening array of fabulous new hotels, apartments and public buildings is something like a Florida world of tomorrow, and you can't help entertain some feeling that it may be all torn down next year and turned into an alligator park.

Nevertheless, the architects and builders of the Miami territory are doing some interesting and beautiful things. They aren't afraid to break with tradition. I believe that they have done many things that the building industry in other cities might well find worth studying.

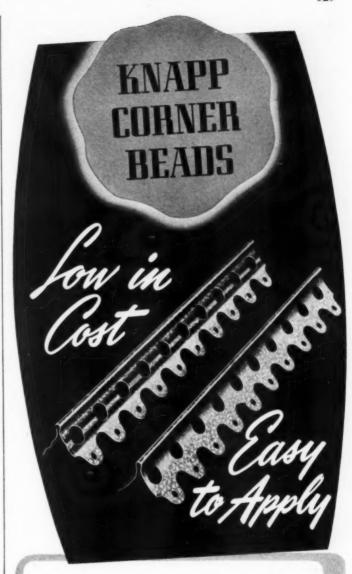
STILL SPROUTING—Every jack-leg saw mill and portable outfit in the territory I drove through is apparently back in operation at full blast. Lumbermen predict that at this rate the temporary lumber shortage will be overcome soon—with a vengeance. Considerable green lumber is finding its way into new construction. In one town where the government cleaned out all the seasoned material, some of the stuff being nailed in place was so green it was still sprouting.

WHITE ROOFS—All through Florida the visitor from the North is impressed by the high percentage of white roofs in the newer houses, large and small. Builders claim the white roof reflects heat: they use cement tiles or asbestos cement shingles. One builder I talked to is planning to try out a coating of seashells imbedded in a heavy built-up base. Exciting, what!

(Continued to page 130)



White tile roof, pastel colored walls in Miami house.



HERE are examples of Knapp Corner Beads—improved types—ideally suited to the home building requirements of today. Manufactured to the same quality and practical standards of other famous Knapp Products, they offer the advantages of quick and easy application . . . true and smooth corners . . . economy and rugged permanence.

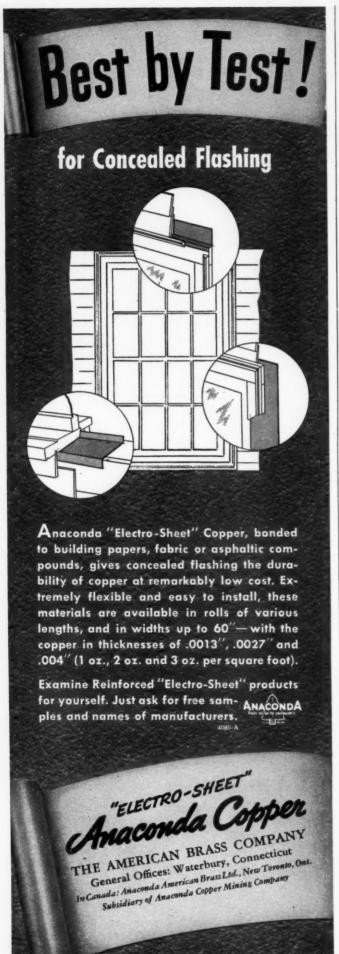
You can depend on Knapp Corner Beads and profit on them too! They're available in a great variety of types and sizes to fit every job.

Write today for full details.

Knapp Corner Beads are made by the manufacturers of Knapp Casings.

KNAPP

METAL TRIM



On & Off the Record-

(Continued from page 129)

BARRACUDAS & SOLAR HEATERS—Almost anything can happen in Miami. The builders equip their houses with window-like gadgets on the roof so the sun heats the domestic water supply free. They make their garage doors better looking than many front entrances I've seen. Houses are well built, low priced and right good looking. When there isn't enough land available they simply build an island in Biscayne Bay, plant a few thousand palm trees and put the houses on concrete piles. Two years later you'd think the island had always been there.

One note of unpleasantness:—As I examined one of the palatial island homes, I asked about the swimming in Biscayne Bay. "Fine," my builder friend said. "But it's a little dangerous. You might lose an arm or a leg. Barracudas."

(Chamber of Commerce note)—The swimming on the ocean beaches is perfectly safe and perfectly wonderful.

LIVE DEALER—One of the livest lumber dealers in Miami is Lindsley Lumber Company, who also can, with considerable reason, lay claim to being the largest dealer in Florida and the Southeast. An important feature of the service appreciated by builders is a complete building material catalog issued monthly with all items conveniently priced per unit. Forest V. Peaker, vice president, keeps an excellent file of photographs of every large building on which the firm supplied materials, and many of these may be seen in this issue of American Builder.

FAIR SAILING—In May this year a sturdy new 6,750-ton diesel-powered merchant vessel will start doing its bit for American shipping. Built in San Francisco by the Western Pipe and Steel Company for the U. S. Lines, at a cost of \$2,127,500, this little boat is one of a series bearing such names as American Manufacturer, American Packer and American Engineer. Its name? —— American Builder.

Kenneth D. Dawson, vice-president in charge of Pacific coast operations for the United States Lines, explained the naming of the new C-1 cargo ship. "To maintain a democracy," he said, "it is imperative that its citizens be informed. We have seen democracies and human freedom disappear in Europe only after the sources of information in a free press were destroyed. It is fundamentally because of its uncensored newspapers that the American public can remain free—protected against tyranny and injustice."

Well, fair sailing, American Builder. This publication will watch your course with interest.

FREE ENTERPRISE—We hear much about free enterprise as applied to business men, but what about the free enterprise privileges of nonunion building workers who have been trying (Continued to page 133)



DECORATIVE—Fine details, such as the screen door, lattice and picket fence, feature this Miami island home.

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"I've always wanted a basement like this"

READ HOW ARMSTRONG'S ASPHALT TILE FLOORS HELP MAKE BUYERS OUT OF PROSPECTS

HERE'S no doubt about it. Smartlooking basement playrooms help sell houses faster.

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You can give your houses the extra sales-appeal of basement playrooms or recreation rooms like the one shown above, at low cost, if you use Armstrong's Asphalt Tile. Floors are quickly and easily installed by hand-a block at a time.

There are 41 different plain and marble colorings from which to choose. These, with the variety of shapes and sizes available, permit almost unlimited design possibilities. Factory-cut insets-like the "four aces" shown here—cost little extra.

Armstrong's Asphalt Tile is a tough, long-wearing floor, too. Moisture and alkalis commonly present in concrete subfloors (on or below grade) won't harm it. The colorings can't wear off because they run right through the material. (All the attention an Armstrong's Asphalt Tile floor needs is daily sweeping, occasional washing and waxing to keep it fresh and bright for years.)

Write for informative book-"Low-Cost Floors for Modern Basements." Armstrong Cork Co., Building Materials Division, 1233 State St., Lancaster, Pa.









T'S Barrett on America's biggest and most famous buildings—and it's Barrett on modest homes and farms all over the country. Why? Because it's a widely known fact that Barrett Roofs turn in a performance that can't be topped for durability and long term economy. Time-tested and timeproved quality has made Barrett "the greatest name in roofing."

When you recommend and sell Barrett Shingles you profit from the public confidence built up by Barrett through 87 years of roofing leadership. And because Barrett Shingles lead in good looks, dependable service and long life, you're sure of satisfied Barrett Broad Shadow Shingles customers-customers who will recommend you to others. That's the soundest basis on which any business can be built.

Get going with Barrett-for easier sales and more of them!

BARRETT BROAD SHADOW SHINGLES. The unusual deep shadow effect of this shingle is the result of double thickness of the shingle at the butt, plus the exclusive Barrett Shad-O Band built-in shadow feature. The Barrett Broad Shadow Shingle matches the beauty of much more expensive roof materials at a cost no greater than that of the average asphalt shingle.

protect this attractive home.



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THE BARRETT COMPANY, 40 Rector Street, New York, N. Y. 2800 So. Sacramento Avenue, Chicago, Ill. Birmingham, Alabama

On & Off the Record-

(Continued from page 130)

to get a job helping Uncle Sam finish the defense program on time? If some small-time union big shot doesn't like the color of his hair, or if he refuses to shell out cash in advance, he can't get a job. Several southern states are considering legislation to prevent unions from extracting fees from would-be workers on government jobs. Also, Congress is threatening to give a much needed airing to the whole subject, but we wonder.

WELL STOCKED MINDS—Walter Lippmann in a recent column points out the value of minds "well stocked with the experience and wisdom" of history. He suggests that the best way to prepare for the understanding and handling of contemporary problems is to study the classics of human affairs of the past. The past is more intelligible than the present because "it is more available for the study of cause and effect of good and evil."

This appeals to me as particularly true in regard to architecture and to the planning and construction of houses. Temporary fads and notions come and go, and frequently the men who plan and build homes are misled by them. If our architects and builders have minds "well stocked" with a sound knowledge of planning and building methods that have withstood the test of time and human experience, they will be able to build homes that will be more soundly suitable over a long period of years.

HOME AND TAXES—Income tax time, which I hear quite a few builders enjoyed especially this year, is one time when home owners appreciate their high real estate taxes and interest payments. A friend of mine said gleefully, "My real estate taxes plus interest on the mortgage are the equivalent of two kids—and believe me, I appreciate the extra deduction."

He also remarked on the fact that a man who sells a house at a loss can claim a deduction only if the house had been rented prior to the sale—a fact you may want to bear in mind.

Other tax lore: Several builders we have talked to lately are hanging on to income property, such as shops and stores built in connection with a development, rather than sell it as had formerly been their custom. All of their leases are being made on a sales percentage basis. They feel it is wiser to spread income from such property over a period of years rather than to sell it now and take a profit which is subject to tax.

FIX THE ROOF NOW—Smart approach to building prospects right now is: they'd better do their building or repairing now while times are good and thus fortify themselves against an insecure future. Most people are worrying about what will happen after this synthetic, war-induced prosperity. Any building man can tell them the answer: buy a LOW UPKEEP HOUSE or fix up your old house now. Don't be like the fiddler of Arkansas Traveler fame, who said he never fixed his roof because when it was raining he couldn't, and when it wasn't he needn't.

FAITH IN THE FUTURE—It's a wonderful testimony to the soundness and sense of the American people that record thousands are buying or building homes this spring. They realize that this is an investment they'll be able to use and enjoy in bad times as well as good. As we said last month; it's an investment in "after-war security."

Many working men unable to afford everything they want are starting out small, and then adding to their house and increasing its value in their spare time. They don't seem to feel that they are "wage slaves" outlawed by the wage and hour law, although they are working in some cases 15 to 18 hours a day. Maybe this is something for Colonel Flemming to look into

GOLFER-BUILDER—L. H. (Harry) Sprague, Jr., of Sarasota. Fla., is one of the youngest builders we know—33—but in addition to this claim to fame is undoubtedly the best golfer actively engaged in the building business. He's local champion and a close runner-up in state meets. He's good at other sports, too, including ping-pong. The result of this proficiency is that quite a number of his best customers come from among the sportsloving people who seem to congregate in Sarasota.

(Continued to page 134)

bama



The New Idea in flooring Homes of OUR HELPFUL NEW FOLDER

Harmonize floor with furniture . . . that's the modern idea for homes! . . . In the living room above, note how the absence of heavy graining in the floor makes for pleasing harmony with the smooth and simple modern furniture. Modern furniture is fine-grained . . . so is Maple . . . and the two live peacefully with each other. Not only Blonde Maple, but other modern furniture looks at home on smooth floors of Maple.

Home-owners—the whole family—will thank you for recommending Hard Maple. It's the longest-wearing comfortable floor and the most ideally suited for modern homes.

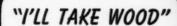
WRITE FOR free copy of our new Home Builder folder—includes illustrations in color of maple floor sections in various patterns. Lay MFMA Maple—in strips or blocks.

MAPLE FLOORING MANUFACTURERS ASSOCIATION 1781 McCormick Building, Chicago, Illinois

> See our catalog data in Sweet's, Sec. 11/88. Write for folder on floor finishes suitable for homes.



Am



"I like the feel of a good hardwood level. It's warmer to handle, strong, and it stays accurate, so I'll stick to a genuine Stanley Cherry Level."



"ALUMINUM for ME"

"Why? Well, because it's light and easy to handle. And it's weather-proof. I'm working outdoors most of the time so I want tools that will stand wet weather. I have had a Stanley Aluminum Level for a long time."

Wood or Aluminum BOTH say STANLEY

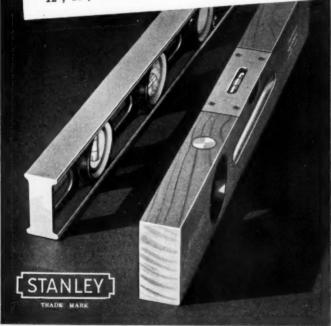
STANLEY No. 313 Aluminum Plumb & Level

Famous Stanley Truss construction - built like a bridge. Six accurate, window protected glasses. Four lengths: 12", 18", 24" and 28".

STANLEY No. 0 Cherry Plumb & Level

The long time favorite with carpenters. Brass plates protects glasses. Five lengths: 18", 24", 26", 28" and 30".

Send for Catalog No. 34 describing the full line of STANLEY TOOLS.



STANLEY TOOLS

Division of The Stanley Works, 133 Elm St., New Britain, Conn.
THE TOOL BOX OF THE WORLD

On & Off the Record-

(Continued from page 133)

OUR DUTY IS PLAIN—"In our business at the present time, extreme emphasis must be put on the general public interest. This country faces a crisis such as the world has never seen. Our duty, therefore, is plain. We must and should do everything in our power to give the greatest possible service quickly and well."

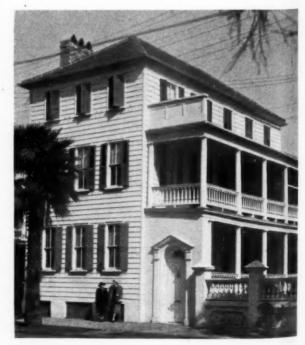
The above is an extract from a message from C. F. Bennett, president of Stanley Works at New Britain, Conn., to employees of the company. It's the sort of patriotic attitude that is going to make this nation's defense program succeed. President Bennett concludes his message: "Our very best may fall short of the needs of the hour—I would like to have every Stanley worker who in any way works on or moves items which are intended for defense, to do so with the feeling that he is privileged to strengthen America by each bit of extra thought and effort he can put into speeding on its way every article we are called upon to make.

"Good Americans will all pull together!"

BUILDERS ORGANIZE—AND HOW—For years American Builder has been urging residential builders to organize, and now within a short space of time two national groups have been set up. They aren't on what would be called loving terms with each other either. The National Home Builders Association is composed principally of members of large city builders associations, and the moving spirits are the Philadelphia, Detroit and Pittsburgh Associations. They invite individual home builders to become members in places where there is no local builders' association affiliated. It's difficult for these scattered members to have much to say.

The other new building group—The Home Builders Institute—is affiliated with the National Association of Real Estate Boards. The membership includes a small number of real estate builders with high professional standards, specializing for the most part in the higher priced homes. This group has a national program which includes a drive for state licensing laws for home builders. Its weakness is realtor domination, and few builders want that.

Ironical note: Neither group represents more than a tiny fraction of the nation's 100,000 plus residential builders, who last year erected more than 420,000 single-family homes. All the homes built by all the members of both groups last year amounted to less than a quarter of the nation's total.



CHARLESTON FRONT—That impressive Colonial doorway leads only to a side porch. Seems to have been an old Charleston custom.

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Christ Episcopal Church, St. Paul, Minn. C. H. Johnston, Architect, St. Paul. P. O. Nasvic, General Contractor, St. Paul. L. J. Larson & Son, Plastering Contractor, St. Paul. Ohio White Finish used on walls and ceilings. Ohio Ritewall Fibered Lime Plaster used for base coat.

Always packed in Red Zig Zag Bags Builders who demand a really dependable finishing lime should use the original Ohio White Finish or its famous twin, Hawk Spread. Both are hydrated with scientific care from 99½% pure dolomite rock. Always fresh, they work fat and fluffy—spread far. Cost no more than other brands. If your dealer can't supply you, please write The Ohio Hydrate & Supply Co., Woodville, Ohio.

MANY DESIGNS TO FIT MANY HOMES



Cape Cod



Mediterranean



French

MAKES MCKWWY FORGED IRON HARDWARE

EASY TO SELL!

Show your customers McKinney and you show them hardware that *matches* any type of home in any price range.

McKinney Designs are definitely related to architectural style. Home owners, architects and builders alike will find that every piece of McKinney Forged Iron offers a pleasing proportion in size and weight and blends into the particular architecture for which it is intended.

McKINNEY MANUFACTURING COMPANY PITTSBURGH, PA.



Cotswold



Southern Colonial



American Farm

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LESS STONING

When You Work With WESTERN PINES*

Time saved on keeping tools in shape mounts into real money! And there's no doubt that the Western Pines are easy on tools. Chisels, for example, hold their edge longer when you work with these soft-textured, evenly grained woods!

Carefully milled . . . thoroughly seasoned . . . free from tendencies to sliver or split, the Western Pines handle readily, work up quickly, result in jobs a man can stand pat on! Ask for and get Western Pines from Association mills!

WESTERN PINE ASSOCIATION

YEON BUILDING



PORTLAND,
OREGON

*IDAHO WHITE PINE

*PONDEROSA PINE

SUGAR PINE

*These Are The Western Pines

REVIEW of the NEWS

Statistics, Associations, Agencies

February Building Volume Highest for That Month Since 1931; March Residential Level Well Above That of Last Year

N February the construction industry, as measured by permits for new buildings, alterations, and repairs, was at the highest February level since 1931, despite a contra-seasonal decline from January.

The volume of permits issued during February in 215 cities of the United States, according to Dun & Bradstreet, Inc., amounted to \$93,602,664. This was 11.3 per cent less than the \$105,558,541 for the preceding month, but 3.4 per cent greater than February, 1940, with \$90,523,005.

The value of permits taken out in the five New York boroughs fell to \$13,675,776 in February from \$19,573,412 in January and \$21,109,022 a year ago. This represented decreases, respectively, of 30.1 and 35.2 per cent. The total for the 214 outside cities was \$79,926,888. Although this was a drop of 7.0 per cent under January's \$85,985,129, it indicated a gain of 15.1 per cent over the corresponding 1940 sum of only \$69,413,983.

According to F. W. Dodge statistics from 37 eastern states, the volume for the first half of March, in all classes of construction, was well above the same period of last year.

Statistics for the four classes of construction are as follows: 37 Eastern States Mar. 1-15, 1941 Mar. 1-15, 1940 Feb., 1941 \$ 75,345,000 \$ 52,970,000 Residential \$116,459,000 107,391,000 29,777,000 90,058,000 Non-Residential Public Works 40,219,000 27,707,000 42,242,000 Utilities 20,685,000 6,069,000 21,614,000 \$243,640,000 \$116,523,000 \$270,373,000

John H. Fahey Warns of Jerry Building

AWARNING that evidences of the apparent renewal of jerry building of homes, such as occurred in the boom days of 1922-29, have been seen again in some sections of the country was issued early in March by John H. Fahey, chairman of the Federal Home Loan Bank Board.

"The prospective home buyer must be protected or an unpleasant situation worse than the boom days of the Twenties will result," Mr. Fahey declared. "In many communities the defense program has already brought about so great a demand for new houses that construction activity is approaching boom proportions. In boom times there is always a temptation for unscrupulous builders to use cheaper grades of material and workmanship. It is necessary, therefore, now, more than ever before, to guard against the evils of jerry building.

"During the boom days of the Twenties, there was much fake construction in this country; the home building industry rode the rising tide, but too often sacrificed permanent values for quick and easy profits. Many of the dwellings built during that period deteriorated so fast as to cause thousands of families to lose the savings they had invested in their homes.

"I sincerely hope that mortgage lenders will not allow the building industry to make the same mistake again. The experience of the Home Owners' Loan Corporation with over a million home mortgages showed conclusively that the filmsy building of the Twenties was a large factor in the foreclosure wave of the Thirties. In the interest both of the home owner and of the lending institution, such construction must be eliminated.

"Good homes don't just grow. A good design means little unless good materials are built into a house. The value of good materials is lost unless they are incorporated into an attractive and livable home. And design and materials can both be ruined by poor workmanship.

"The mortgage lender has a long-term interest in each home

"The mortgage lender has a long-term interest in each home on which he holds a mortgage. If the house begins to crack up speedily, or if the maintenance costs are excessive, the home owner will not or cannot keep up his monthly payments. That means that the lending institution must go to all the expense of taking over the property and we all know to our sorrow that foreclosure, particularly on a poorly built home, involves large losses to the lender as well as to the borrower.

"It is of the utmost importance to every lending institution that its borrowers have a real incentive to maintain their mortgage payments at all times and that their equities be protected against losses resulting from deflation. It is my firm conviction that mortgage lending institutions, by assuring the purchaser a sound, well built home and by refusing to finance the homes that prospective borrowers cannot afford, can do a great deal to guard against the ill effects of the real estate cycle."

National Gallery of Art Dedicated

AT a formal dedication on March 17. President Roosevelt accepted for the nation the completed gift of the late Andrew W. Mellon, the National Gallery of Art, Washington, D.C. Costing \$15,000,000, this impressive building, art collection and endowment for maintenance represent a gift from Mr. Mellon of over \$50,000,000. It is the largest marble building in the world—782 by 303 feet. The builder was Vermilya-Brown Co., Inc.



NATIONAL Gallery of Art, gift of the late Andrew W. Mellon. Architect: John Russell Pope (1874-1937); associates, Otto R. Eggers and Daniel Paul Higgins. View shows the Mall front. It stretches for three blocks, is slightly longer than the Capitol and its wings.

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CITIES

Home Builders Institute to Meet in Washington May 15 to 17

All Operative Home Builders Invited

PERATIVE home builders from all over the country will meet in Washington May 15, 16 and 17 for a three-day discussion of our whole machinery for home production. The meeting is called by the new Home Builders Institute of America, professional builders' branch of the National Association of Real Estate Boards. It will be the initial meeting of the new Institute's entire membership. Every bona fide home builder, whether or not he is a member of the Institute, will be welcome to attend the sessions, to be held at the Mayflower Hotel.

Heading the discussions from the agencies of government concerned with home building will be: Abner H. Ferguson, Federal Housing Administrator; Charles F. Palmer, Co-ordinator of Defense Emergency Housing; John Carmody, Administrator, Federal Works Administration; James F. Twohy, Governor, Federal Home Loan Bank system. Leading home builders taking part in the discussions will include Hugh Potter and E. L. Crain, Houston; George F. Nixon, Chicago; and Fritz Burns, Los Angeles.

F. Stuart Fitzpatrick, manager of the United States Chamber of Commerce, and chairman of the National Homes Foundation, will talk on the present movement for co-ordinate action in the building industry looking toward increasing new home construction, particularly in the low cost field. Roy Wenzlick, president of Real Estate Analysts, Inc., will trace present trends in building costs, home building volume, and financing.

M. L. Wilson of the Department of Agriculture, director of its extension service, will talk on home building needs and opportunities in villages and rural communities. Bernard L. Johnson, editor of American Builder, will discuss the "Low Cost of Good Construction on a 20-Year Basis."

Election of charter members of the Institute and discussion of its whole program for sound home production will be an important part of the work of the three-day meeting.

A. B. Ormsby Co.

Toronto



ESTIMATE FOR 1941

Number Single-Family Homes To Be Built-Price Classes

(Based on FHA Figures)

MERICAN BUILDER offers the following estimates for new single-family homes to be built in 1941 arranged according to cost or price.

Total number of residential units to be built	525,000
	480,000
	92,160
Single houses costing \$4,000 to \$6,000—(49.2%)	236,160
	141,120
Single houses costing \$10,000 or more—(2.2%)	10,560

valued at less than \$4,000; 49.2% were valued at from \$4,000 to \$6,000; 29.4% were valued at from \$6,000 to \$10,000; and 2.2% were valued at \$10,000 or more. Applying these percentages against the *American Builder* estimate for 1941 of 480,000 single-family homes, we obtain the estimated number in each of these price classes as shown in the table below: 92,160 houses costing less than \$4,000; 236,160 costing from \$4,000 to \$6,000; 141,120 costing from \$6,000 to \$10,000; and 10,560 costing \$10,000 or more.

The Federal Housing Administration has made a similar study for the four years, 1936, 1937, 1938 and 1939, revealing facts as shown in the accompanying diagram. Note that the percentage of houses costing less than \$3,000 has steadily decreased; also, that the percentage of more expensive houses costing \$7,000 or more has decreased even more dramatically.

The greatest shrinkage has been in the number of homes costing \$10,000 or more; these amounted to 12.9% of the total

in 1936 and declined to only 2.2% in 1939. The chart shows that the popular home today is in the price class \$3,000 to \$7,000. The percentage of the total represented by these four groups has steadily increased during each of these four years. The heaviest increase is in the two middle groups, \$4,000 to \$6,000, which price range accounted for almost half of FHA insured new homes in 1939.

In considering the above figures taken from FHA studies it

should be remembered that FHA insured mortgages are most popular with the lower income group home builders who otherwise would not have satisfactory banking references for their well-to-do classes of people, are not so well represented in these figures.

Additional interesting data in regard to the size and style of

VALUE OF NEW HOMES FINANCED BY F.H.A. INSURED MORTGAGES

urce: Federal Housing Adminstration Division of Econo 1936 1938 1939 1937 FHA Valuation of House and Lot Per Co \$2,000 or Less 0.7 Per Cent of Total Number of Ho Per Cent of Total Numi Per Cent of Total Nu 0.3 0.2 0.1 \$2000 to 2,999 58 48 3.5 2.6 \$3,000 to 3,999 12.7 141 16.5 \$4000 to 4999 16.6 240 20.1 22.8 \$5,000 to 5,999 175 19.7 243 \$6000 to 6.999 122 14.4 18.6 \$7,000 to 7,999 100 94 8.2 6.4 \$8,000 to 9,999 11 6 9.0 4.4 79 2.2 \$10,000 or more 129

The above figures are based on an analysis by the Federal Housing Administration of homes built in 1939 under mortgages insured by FHA. A total of 115,500 new homes were covered by FHA insured mortgages in 1939 which was about 25% of the total number of new homes built that year. The FHA analysis shows that 19.2% of the new homes in 1939 were

You'll find the "Architects' and Builders' Service" of your local telephone company ready at all times to help in planning efficient, economical telephone Built-in telephone arrangements. Call your nearest Bell Telephone **Business Office and** outlets are signs of hit with prospective get acquainted with quality construction this service. home buyers. Yet a throughout the whole telephone outlet costs no more than an orhouse. They're dinary electric outlet, sales points if installed during that make a construction.

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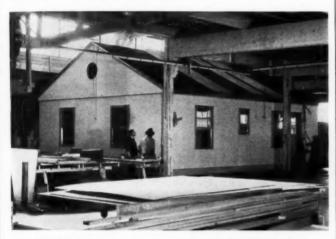
the new homes built in 1939 under FHA auspices are revealed in this study. For instance, in the matter of garage capacity: 20.7% of the houses had no garage; 53.5% of the houses had a one-car garage; 25.6% of the houses had a two-car garage; and 2% of the houses had garages for three or more cars.

With reference to the number of rooms, the FHA analysis for 1939 shows that 18.1% of the new houses had 4 rooms; 49.1% had 5 rooms; 27.8% had 6 rooms; and 5% had 7 rooms or more. The exterior wall material of these FHA houses was as fol-

lows: 40.8% wood; 29.6% brick; 20.4% stucco.

"Cotton House" to be Exhibited

COTTON as a home building material will be demonstrated by the U. S. Dept. of Agriculture by means of a "Cotton House" to be exhibited in Washington beginning April 7. This house will be thoroughly demountable, one-story, and measure about 24 feet in width and 32 feet in length. It will be of box-girder construction, cotton covered plywood, both inside and out, will be cotton insulated, and will utilize cotton rugs and other interior cotton furnishings wherever practicable. The Speedwall Company, Seattle, has fabricated the house in its west coast plant and is shipping it to be erected in the patio of the Agriculture Department Building in Washington.



"COTTON House" set up in the Seattle Speedwall plant.

Using cotton fabric covered fir plywood for all walls and ceilings, it will utilize approximately 4500 square feet of the textile in the demonstration house. Cotton is affixed to the face of the panels by using waterproof synthetic resin adhesive, to provide a perfect base for decoration with paint, wallpaper, or texture, according to I. F. Laucks, head of the Speedwall organization. Such walls can be decorated immediately after erection, saving construction time, and they will not crack or check, it is pointed out. The cotton also helps provide a better insulation against wind, cold or vapor. Decoration, both on interior and exterior surfaces will be with synthetic resin bound plastic paints.

Western Pine Elects New Officers

AT THE annual meeting of the Western Pine Association, held at the Portland Hotel, Portland, Ore., on Feb. 28, J. M. Brown of the Long Lake Lumber Company, Spokane, Wash., was elected president.

Other officers of the Association, elected for 1941 are: J. R. Gray, Diamond Match Co., Spokane, 1st vice president; T. S.

Walker, The Red River Lumber Co., Westwood, Calif., 2nd vice president; and Truman W. Collins, Grande Ronde Pine Co., Pondosa, Ore., was re-elected treasurer. Representatives from the Western Pine

Representatives from the Western Pine Association to serve on the Board of Directors of the National Lumber Manufacturers Association are Swift Berry, Michigan-California Lumber Co., Camino, Calif.; president-elect J. M. Brown of Spokane; C. L. Isted, Shevlin-Hixon Co., Bend, Ore.; R. R. Macartney, Weyerhaeuser Timber Co., Klamath Falls, Ore.; and Walter Neils, J. Neils Lumber Co., Libby, Mont.



J. M. BROWN

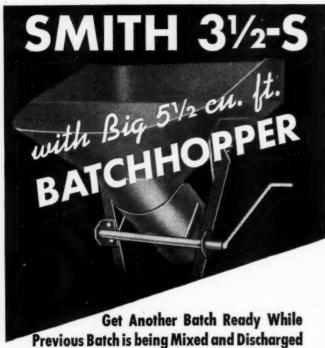
EVERY CUT IS EASY



"Awkward" cuts or heavy cuts are easy and quick with the "Duplex" Handle and extra power of the Stanley W8 Saw! Saves time on every building job – cuts off sheathing, rips flooring, or zips through timbers 2¾" thick! Ask your Stanley distributor for demonstration, or write for new descriptive folder. Stanley Electric Tool Division, The Stanley Works, 133 Elm St., New Britain, Conn.

STANLEY ELECTRIC TOOLS

"COST LESS PER YEAR"



Now — you can put your small concrete jobs on a fast, production basis. This little Smith Half-bag Tilter, equipped with a big capacity, gated batchhopper, enables you to speed up the mixing operation. Each batch follows right on the "heel" of the preceding batch. No wasted moments. One man is kept busy all the time. Vertical water tank accurately measures the water requirements. Other Smith features include famous double cone drum with "End-to-Center" mixing action—"Tilt and Pour" discharge — Spring mounted axle — Roller bearings—Pneumatic-tired, disc wheels, etc.

Any Smith Tilter in the Field can easily be equipped with a Smith big capacity batchhopper and vertical water measuring tank, Investigate today, Write for literature.

The T. L. SMITH COMPANY 2849 N. 32nd St. Milwaukee, Wis.



4% Money Offered by Bowery

LAUNCHING a movement to reduce the cost of home financing in New York City and in Westchester, Nassau and Suffolk Counties. The Bowery Savings Bank announced recently that it is prepared to give borrowers the benefit of a 4 per cent interest rate on new 4½ per cent FHA-insured loans.

The new plan will enable borrowers to pay off 25-year FHA-insured mortgages in 22 years, and 20-year mortgages in 17 years,

11 months. Interest savings will be material.

The Bowery Savings Bank pioneered two years ago in reducing its rate on FHA-insured loans from the then legal maximum of 5 per cent to 4½ per cent. Since then, the bank has made 4½ per cent loans totaling more than 15½ million dollars in

cash and commitments.

The new plan, which has been approved by Federal Housing Administration authorities at Washington, may be used at the option of the borrower. The bank estimates that when a borrower pays off a 25-year mortgage in 22 years, he can save \$139.32 interest on each \$1000 of principal. Savings on a 20-year mortgage paid off in 17 years, 11 months, can be as much as \$101 interest on each \$1000 of principal.

The plan requires no larger down payments than at present and, except during the first years of a loan, no larger monthly payments. In explaining the plan, an official of the bank said:

"FHA regulations now require a mortgagor to pay at least \$5.42 a month to reduce principal and meet interest charges on each \$1000 of the original principal of a 25-year 4½ per cent loan. If he wishes to use the new plan, he will pay 93 cents a month more per \$1000 of original principal for the first five years of the loan. The bank will apply this extra 93 cents toward reduction of principal and also will give the borrower the benefit of a 4 per cent interest rate, also applying against principal the ½ per cent interest which the mortgagor saves.

"At the end of five years, extra payments by the mortgagor cease but he continues to receive the benefit of the 4 per cent rate and the bank continues to apply against principal the ½ per cent interest which the mortgagor saves. The plan works in the same way on 20-year mortgages, except that the mortgagor pays 90 cents a month more on each \$1000 of principal for the first five years of the loan. As a result, for five years the mortgagor pays \$7.10 a month per \$1000 of principal instead of \$6.20, the regular

FHA rate."

Harrington Heads G-E Air Conditioning Sales

E LLIOTT HARRINGTON has been named sales manager of the General Electric air conditioning and commercial refrigeration department, with headquarters at Bloomfield, N.J. He has been connected with G-E air conditioning and automatic heating

G-E air conditioning and automatic heating activities from their inception, and his early assignments on the development of an automatic oil furnace led directly to the formation of the department, in which he has served in various engineering and sales capacities. Under the new arrangement he will supervise distribution and policy matters, and under him will operate three separate sales sections. The automatic heating sales section will be under L. H. Hobson. The cooling equipment sales section will be headed by C. M. Rowland. E. B. McClelland will act as assistant sales manager.



ELLIOTT HARRINGTON



I H HORSON



C. M. ROWLAND



E. B. McCLELLAND

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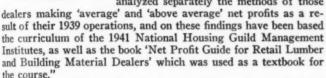
Johns-Manville Holds Guild Management Institutes

WO J-M Guild Management and Merchandising Short Courses TWO J-M Guild Management and Merchandship of retail lumber and building material dealers were conducted this year: on March 17-22 at the Berkeley-Carteret Hotel, Asbury Park, N.J., and on March 24-29 at the Edgewater Beach

Hotel, Chicago. Arthur A. Hood, director of Dealer Relations, was in charge.

According to Mr. Hood, this year's courses consist of an intensive analytical study of those retailing practices which have helped produce "better than average net profit" in the business of retailing lumber and building materials.

"Through exhaustive studies during 1940, Johns-Manville's Dealer Relations Division has analyzed the policies, techniques, methods and procedures of hundreds of retail lumber and building material dealers," Mr. Hood said. "We analyzed separately the methods of those



Among the subjects studied at the Institutes were: Budgeting, Relation of Accounting to Profit, Estimating Building Packages, Monthly Payment Financing, Pricing for Profit, Sales and Personnel Management, Operating Control, Advertising and Promotional Techniques, Market Analysis, Securing the New Home and Farm Potentials, Estimating Profitable Selling Prices on Complicated Improvement Jobs in 45 Minutes, Selling Contractors at Profitable Prices against Cut-throat Competition.

Key executives of Johns-Manville took active part in each Institute, and Mr. Hood in addition drew upon nearly the entire building materials staff for instructors. L. M. Cassidy, vice president in charge of building materials, L. C. Hart, vice president and general manager, H. M. Shackelford, vice president in charge of sales promotion, R. L. Johnson, A. D. Lierman, H. D. Bates of the Sales Promotion Department; J. L. Wood, general credit manager, L. H. Morgan, time payment manager; C. F. Ames, Jr., E. W. Smith, H. F. Lotz, D. L. Pomerantz of the building materials staff, and J. F. Schaffhausen, agricultural engineer, were among the J-M men who participated.

Insulite Reorganization Completed

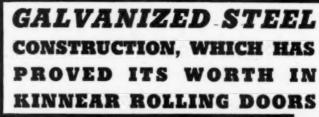
ANNOUNCEMENT is made from Minneapolis that reorganization of the Minnesota and Ontario Paper Company, parent organization of the Insulite Company, is now complete as of March 1, terminating a receivership of ten years' duration. R. H. M. Robinson has been elected president of the reorganized company, and he has announced that there will be no change in policy in the operation of the new company, and that there would be no changes in the personnel staffing the key positions.

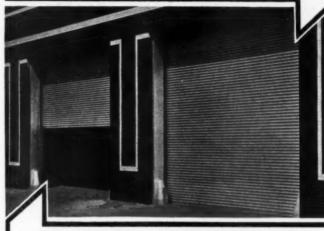
E. W. Morrill continues as general sales manager of Insulite, assisted by M. S. Wunderlich, assistant sales manager, technical; John H. Giles, assistant sales manager, merchandising; L. C. Monahan, Eastern sales supervisor; U. L. Plain, Western sales supervisor; M. C. Fairchild, merchandising manager; G. F. Hoppe, advertising manager; T. J. Lindstrom, manager of industrial sales; and A. S. Bull, chief sales engineer.

An era of development far more revolutionary than that ex-

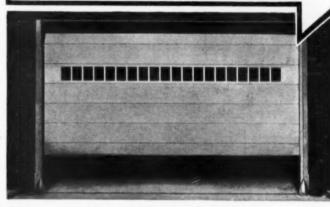
perienced by the insulation board industry since its inception a quarter of a century ago lies immediately ahead for Insulite, General Sales Manager Morrill predicted in announcing this successful reorganization of the business. A pioneer in the field of fibre insulation boards, Insulite is carried in stock by most retail lumber dealers and is a widely used material for sheathing, lining, and general insulation purposes.

E. W. MORRILL





IS NOW OFFERED IN GALVANIZED STEEL KINNEAR ROL-TOP DOORS



Builders everywhere acclaim this door—and it's easy to see why! It gives the "extra measure" of ruggedness and durability for which Kinnear's steel interlocking-slat door has been famous for almost half a century! Sections are heavily galvanized! They are rust resistant, and give maximum protection against the elements. Cut dollars off door maintenance costs! The rugged all-steel construction also means more thorough protection against fire, intrusion, wind, or accidental damagel

In addition, Kinnear Steel RoL-TOP Doors offer all the advantages of space-saving upward action. They are spring counterbalanced and ingeniously hinged for smooth easy operation. Strong continuous angle irons assure rigid jamb support. And they are as simple to install as they are economical in service. Built in any size, with motor or manual control and with any number of light sections. ual control, and with any number of light sections. For permanent satisfaction on service door requirements, install the Kinnear Steel RoL-TOP. Write today

for complete details and latest catalog!



The KINNEAR Mig. Co. 1560-80 FIELDS AVENUE COLUMBUS OHIO





● The wise builder resists the temptation to skimp quality in order to reduce initial cost because he knows that worthwhile customers appreciate that good construction costs less in the long run. That's why so many successful builders install RYBOLT automatic heating equipment. Its extra quality may add a trifle to the owner's monthly payments but the monthly savings in repairs, maintenance and replacements more than pay for the unit over the life of a long term mortgage. And RYBOLT extra efficiency, convenience and comfort are often the deciding



This RYBOLT Automatic Winter Air Conditioner has as its heating element the well known RYBOLT Series 15 cast iron coal-fired furnace. Has every advanced feature for modern efficiency, comfort, convenience and economy. Blower

convenience and economy. Blower cabinet may be placed on either side of unit. Attractively finished in smooth baked enamel with aluminum finished front. 4 sizes.

Write for "The Complete Line" Folder



THE RYBOLT HEATER COMPANY

LETTERS from Readers on All Subjects

Facts, Opinion and Advice Welcomed Here

Mortgage Money-Sources and Amounts Insured by FHA

Chicago, Ill.

To the Editor:

In the report of the "Hearings Before the Temporary National Economic Committee" (Part 11—Construction Industry) covering hearings from June 27 to July 14, 1939, as published by the Government Printing Office, there are included (page 5484) the following figures. The source of these figures, it is stated, is the Federal Home Loan Bank Board.

Exhibit No. 859 is entitled, "New Mortgage Loans on One-to-Four Family Non-farm Homes Made by Various Lending Agencies, Amount of These Loans Insured by the FHA and Percentage of Insured Loans to Total Loans." Figures are given for the four years 1935, 1936, 1937 and 1938. They show an increasing percentage of loans insured by FHA as follows:

1935	4.5%	(of all home mort- gages made)
1936	14.8%	
1937	17.6%	
1938	20.0%	

Undoubtedly these percentages are showing a further increase for 1939 and 1940.

Taking the latest of the four years presented, we have the following figures on sources of mortgage money with the amount of loans made by each, the amount insured and the percentage insured.

	Amount	1938 Amount	
Agency	Loans Made	Insured	% Ins.
Commercial Banks\$	560,000,000	\$252,000,000	45.0
Life Insurance Cos	237,000,000	39,000,000	16.5
Mutual Savings Banks	105,000,000	11,000,000	10.5
Building & Loan Assns	705,000,000	49,000,000	7.0
HOLC	89,000,000	************	
Individuals & Others	669,000,000	122,000,000	18.2
Total	\$2,365,000,000	\$473,000,000	20.0
	TH	OMAS STRO	ONG.

Agrees Socialism Is Threat

Kansas City, Mo.

To the Editor:

I want to give my enthusiastic and sincere approval to the spirit of the editorial that appeared on the "Publisher's Page" of your March issue, "Socialism, Threat to Home Ownership."

I have been a periodical, but not a continuous, reader of your publication for the past ten years. Therefore, I do not know whether the editorial I am referring to is a follow up or whether this is the first such expression that has appeared in your columns. In any event, I believe such expressions should have been more vigorously made by newspapers and magazines in the spring of 1933 when the present wave of socialism first appeared on the horizon as a menace to our society.

The whole spirit of your editorial is crystallized in two sentences: "Socialism—towards which many leaders of public opinion now seem to be drifting—is at the core a system of public ownership. And already Uncle Sam has taken several long

steps in that direction."

There has never been an instance that can be called to attention when the federal government made a success of operating a public business. It has not been successful in the operation of the Post Office so far as the finances of the department are concerned. I should not want to see it become the owner and operator of our telephone and telegraph systems, railroads and air transportation companies. I hope it will be unsuccessful in

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taking over the control of the big insurance companies, but I am not sure that it will be unsuccessful.

The reason why I am somewhat pessimistic about the present trend is because I do not have enough confidence in the intelligent and unselfish patriotism of the average citizen; day-laborers and capitalists alike.

Another reason why I am somewhat pessimistic is because I believe our administration at Washintgon, and the Hitler administration in Germany are very intelligent about the reactions of the average individual and they are taking advantage of those human selfish reactions.

WILLIAM B. HENDERSON.

American Builder Designs Much Copied

Rutland, Vt.

To the Editor:

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There is a letter in the March issue of American Builder, written by C. I. Cheyney, and picture showing house he built, after seeing the house of Mr. Cameron in Albany, N.Y.

I saw the plans you published in June, 1935, as the House of the Month. I secured plans and, with few changes, built it here in Rutland, Vt. I was careful to preserve the architecture, but widened the main house, as I thought some rooms were a little



FINE home built in Rutland, Vt., by Reader Ives.



TWO pages from "American Builder" that were the inspiration for the above house built by F. C. Ives.

small. I had heard there was a house in Albany built from these plans, and have been told of another one having been seen somewhere in Massachusetts.

It is a very attractive house and has received much favorable attention. It was sold before half finished. I suppose every builder who has built after these plans has made some changes to suit his own ideas, but I feel that I did a good job.

F. C. IVES, "Designer & Builder of Convenient Homes."

WEISWAYS

FOR EVERY NEED IN NEW AND REMODELED HOMES

BUILDERS find these guaranteed leakproof cabinet showers the answer to the present-day demand for more and better bath facilities in homes of all sizes. Foot-Grip, No-Slip floor of vitreous porcelain, in at-

tractive sea-shell pattern, is safe and sanitary. Weisway's 4-way protection — bonderized galvanized metal beneath synthetic enamel, or porcelain enamel finish insures long life, trouble-free service.

MASTER BATH

Vitreous porcelain walls and floor, available in choice of colors, add gleaming beauty in most luxurious surroundings. The separate stall shower is in increasing demand as essential equipment in finest modern bathrooms.

EXTRA BATH

Corner entrance Weisways are readily combined with other fixtures to provide a complete bathroom in small floor area. Weisways make added bathing facilities possible and practical in inexpensive small homes as well as in large residences.

IDEAL FOR MODERNIZING

Weisways are complete, self-contained units, easily installed in present homes without special treatment of building walls or floor..guaranteed leakproof!

MAIL COUPON NOW for detailed information about the complete line of Weisways for homes of all sizes and cost; no obligation.

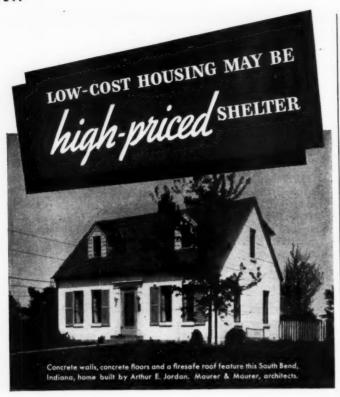




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Henry Weis Mfg.	Co., Inc., (Est.	1878) 401 Oak 5	St., Elkhart, Ind.
Without obligation Showers.	send detailed	information on	Weisway Cabinet

Name	
Street	
City	State



Sell more homes by featuring the true thrift of CONCRETE

If you're tired battling for house jobs on price alone, try featuring the economy-through-the-years of concrete construction! It will win you a steadily-growing volume of business—as it has done for many others.

You can demonstrate to buyers that their maintenance bills will be lower, and the yearly cost of their homes less when walls, floors and foundations are concrete.

More Reasons Why Concrete Homes Sell Quickly

Concrete walls are firesafe . . . keep out cold, heat and dampness . . . take a wide variety of attractive patterns and finishes . . . keep their distinctive, beautiful appearance with very little maintenance. Concrete floors resist fire, termites, decay . . . can't warp, creak, shrink . . . make the home more comfortable and quiet . . . take any type of floor covering.

Build a firesafe concrete demonstration home this year. Write for booklet, "Suggested Designs for Small Firesafe Concrete Homes," sent free in U. S. or Canada.

PORTLAND CEMENT ASSOCIATION

Dept. A4-3, 33 W. Grand Ave., Chicago, III.

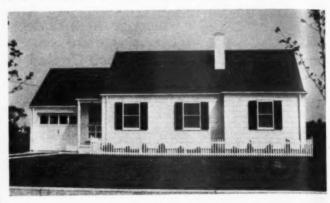
A national organization to improve and extend the uses of concrete... through scientific research and engineering field work

Another Design "Marches On"

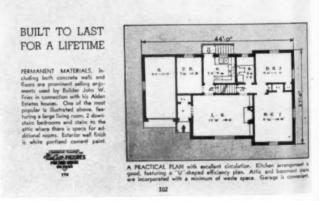
Sea Girt, N.J.

To the Editor:

Here is a picture of my house. I thought you might be interested in knowing that I chose this particular house from your 1939 Home Design Book, page 102, where it was presented as "Built to Last for a Lifetime." The house in the picture was built of concrete. A few changes were made from the original







ANOTHER home and its "American Builder" source.

plan; room size was increased, asbestos shingles were used instead of concrete; and double French doors substituted for the dinette window, opening on a flagstone terrace. This house is located in a new development, "Old Mill Farms Village."

We have also built one other house from your Design Book of 1038

CHESTER T. GAGE.

Wants to Use "Security" Theme

Wyoming, Del.

To the Editor:

We are extremely well satisfied with our new copies of the American Builder and feel that they have paid for themselves already in their exposition of practical building ideas. In fact,

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we intend to keep the copies on top of our desks for some time as valuable reference material.

May we have your permission to print the following in a local paper (reprinting your editorial of last October)?

"The Only 'Indestructible Security'
"A Home of Your Own for \$1.00 per Day

"We design your home, arrange the financing, prepare all plans and specifications and build that home complete in every detail at a predetermined cost which you are aware of before you commit yourself in any manner."

JOHN H. BROWN, T. R. Brown Company, Lumber, Millwork, Hardware, Paint.

Enjoys Editorials

Seattle, Wash.

To the Editor:

I enjoy your practical magazine and especially your "safe and sane" attitude toward communism and the other forms of atheism that are grasping at the throat of everything worth while these days.

Your editorials are brief but certainly to the point. If we had had a few more men like yourself with the courage to stand for the truth we never would have gotten into the predicament in which we now find ourselves.

You have our wishes for your greatest success.

A. J. CARR, Building Contractor, Plans and Superintendence.

Hoquiam Remodeling Stirs Interest

Hoquiam, Wash.

To the Editor:

Your March issue has just been received, and we wish to express our appreciation for the splendid display that you have given our Hoquiam story. We are sure that this article will do a great deal to further the use of outdoor plywood for store and service building modernizing.

At this time, also, we wish to express our appreciation for the privilege of purchasing preprints of the article. This printing has been received, and we are putting it into distribution.

You will be interested to know that the Hoquiam Chamber of Commerce is already receiving inquiries from various parts of the country as a result of a Chamber of Commerce story, on the same subject, told in the March "Nation's Business." The inquiries to the Chamber of Commerce, stimulated by the "Nation's Business" article, are usually from committees or public-spirited citizens. Such inquiries, of course, are answered by the Hoquiam Chamber of Commerce with as much information as they can give, including the fact that our company participated in the program. Then we follow up with an appropriate letter, supplying several preprints of the American Builder article for the use of the committee. We believe that this routine has prestige value for all concerned. We feel sure that this method has your hearty approval.

M. S. MUNSON, Harbor Plywood Corporation.

"Best Book on Building"

Ottawa, Canada.

To the Editor:

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Just a note to let you know how much I enjoy my American Builder each month. It is the best book on building and construction I have ever read and has helped me an awful lot.

Enclosed you will find my check for my renewal and would you please rush my copy of Security Homes.

JAMES W. DAVIDSON.

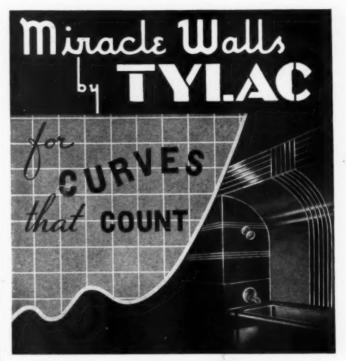
Will Distribute Editorial

Wabash, Ind.

To the Editor:

In the February issue of the American Builder you present the subject, "Socialism the Principal Enemy." I would like to have a few pages if you can supply them to give to parties who never read American Builder. That article should be read by people of every occupation who wish to keep this country the land of the iree and the home of the brave.

IRA ROBY.



Beautifully curved, lustrous streamlined interiors of TYLAC result in an upward curve in the sale of homes. The distinctive touch provided by TYLAC in a home is "Showmanship" that closes the sale. In bath and kitchen, the two key points of interest to the prospective buyer, TYLAC gives appealing color and a wall surface that requires only simple washing to keep clean.

TYLAC gives the architect abundant latitude in designing—satisfying individual tastes in new homes and remodeling jobs. Easily adapted to the budget, TYLAC costs but little more than plaster and the initial decorating. TYLAC is PERMANENT, eliminating all future decorating costs.

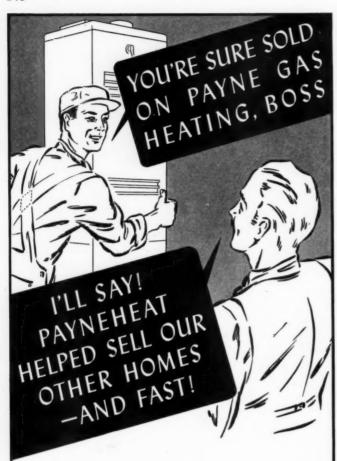
TYLAC is equally well adapted to commercial interiors. The smart elegance which it provides attracts trade and helps the upward curve of retail sales.

Get full particulars now on this distinctive, lustrous wall covering for kitchens, bathrooms, play rooms, or for restaurants, stores, offices, hospitals, lounges—any interior where beauty, permanence and economy are prime factors.



TYLAC COMPANY, Dept. B-4, Monticello, Illinois
Without obligation you may send me complete informa-
tion and samples of TYLAC.

Name										0			•	•	0	0			•					,	0		0	į
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Yes, PAYNEHEAT is a top "salesman" for hundreds of builders. PAYNE provides everything the discriminating buyer wants in heating: gas fuel for speed, cleanliness and convenience—streamlined, clean-cut design—finest materials and craftsmanship—laboratory-tested dependability. \$\phi\$ PAYNE

pioneered and perfected modern gas heating — and PAYNE quality costs little if any more.

Illustrated, Forced Air Unit. Also: Zoneair Units • Gravity Furnaces • Floor Furnaces • Duplex Furnaces • Modern Consoles • Spacesaver Units • PAYNE meets every house heating need.





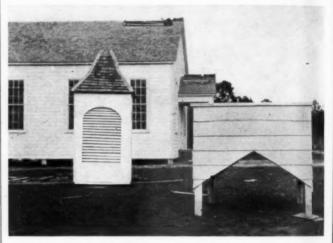
Payne Furnace & Supply Co., Inc., Beverly Hills, California

PRACTICAL JOB POINTERS AND BUILDING DATA

Sectional Cupola Simplifies Erection

DESIGNED in two sections, each erected completely on the ground before being hoisted into place on the small church which was to be adorned by the completed cupola, the building and painting of this portion of the edifice were completed in a fraction of the time and with much less effort than had the cupola been assembled and built in place.

The lower section was formed with the four corner timbers projecting, these being measured to fit snugly into recesses left when timbering the church roof. The siding, cut to the exact



SECTIONAL cupola simplifies problem of mounting atop church.

base section being equipped with supporting legs which interlock

with appertures in roof.

angle of the church roof, needed only the application of metal flashing to complete the water-tight job. The top or belfry section was formed to fit snugly within the squared top of the lower portion, and to be fastened there after being hoisted to the church roof.

Erection of the cupola in two sections reduced the amount of load to be lifted at any one time, the pieces being pulled into place with a shear frame and tackle carried to a winch on the rear of an oil field truck—ELTON STERRETT, Longview, Texas.

Sealing Bottom of Garage Doors

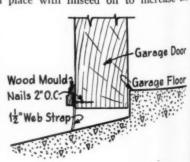
HERE is a solution, time tested and proven, for closure at the bottom of garage doors. A wind tight closure is provided which is important in attached garages where heat loss is to be considered; it also allows compensation for sag in the doors and flexibility to accommodate dirt, small stones and snow and ice.

The web trunk strap can be purchased at any local store for about \$.30. The moulding may be wood or metal and is used as dressing.

I saturate the strap in place with linseed oil to increase the

wearing qualities and to prevent saturation with water and sticking fast when freezing. It can then be painted to match the door. It is essential the nailing of the strap to the door be secure; to obtain this I use small nails and a close spacing.

—EDWARD M. JEN-KINS, Scarsdale, N.Y.



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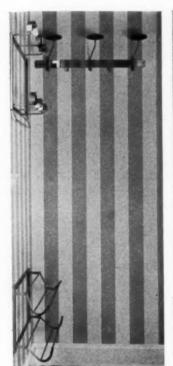
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Hangers Give Closets Sales Appeal

ERE are four closets that are helping prominent builders sell homes. Smart builders today are dressing up the closets and making them really attractive. Note that several of these have colorful modern wallpaper and also that the edges of the shelves are painted a contrasting, bright color—usually red or blue. Shelves are well fitted, sanded and given two coats of paint. Many builders are going still further in closet development and are installing the latest in convenience fixtures that make the closets do double capacity. These fixtures include shoe and tie racks, hat holders, towel bars, umbrella and cane holders, and others of substantial chrome finish construction, screwed in place so that they are permanent. These fixtures, plus the bright, colorful paints and wallpapers, put in new sales appeal.



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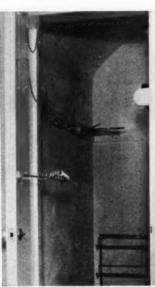
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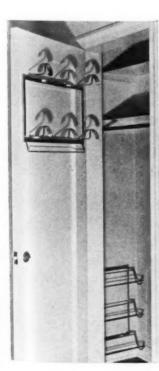
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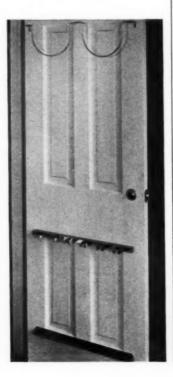
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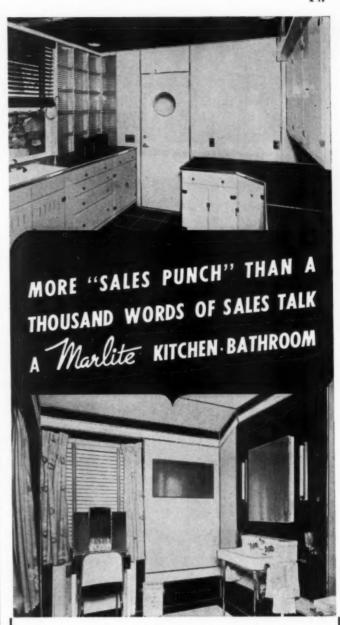
Door



LEVITT & SONS, Long Island home builders, find it pays to equip bedroom closets. Here are examples of hat, tie and shoe racks, umbrella rack, and hat and shoe fixtures. Note also the gay striped wallpaper.







With Marlite, you can give your prospects extra quality and extra luxury at a very low cost. Both Marlite Deluxe (high polish mirror finish) and the new low priced Marlite Velvetex (velvet smooth finish) permit working out truly distinctive room treatments at a cost that pleases even the price-minded buyer. Marlite comes in prefinished wall-size panels readily cut to size and applied to old walls or new, by carpenters. Periodic renovating expense is eliminated. For Book on Home Interiors, see your lumber dealer, or write direct. See our Catalog in Sweet's 11/39.

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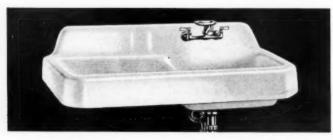


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- Keep in touch with Kohler for news of first-quality fixtures and fittings, designed for *service* and priced for *value*. Kohler Co. *Founded 1873*. Kohler, Wis.







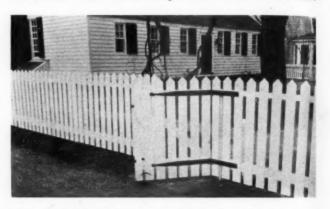
New TRIMM Sink. With 21 $\frac{1}{4}$ -inch depressed drainboard. Beveled apron. Size 42×20 inches.

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PLANNED PLUMBING AND HEATING

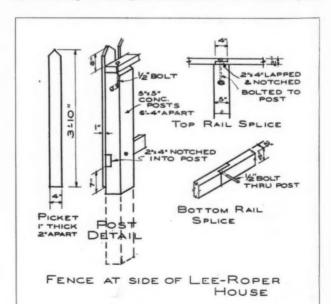
How to Build Colonial Williamsburg Fences (Part II)

THE Colonial gates and fences shown with this article were especially photographed by American Builder in the historic village of Williamsburg, Va., which abounds in Colonial lore and charm. In last month's issue, two of the fences of the famous Wythe house were shown. This month we are presenting several additional Wythe house fence details and also the front, side and back yard fences of the recently restored Lee Roper house. When one of the Williamsburg houses is rebuilt it is restored to its original Colonial beauty in every detail, and that includes the gates and fences. Since the Lee Roper house is one of the more





STURDY WILLIAMSBURG picket fence at side of famous Lee Roper house. Pickets are a full 1" thick and 4" wide spaced 2" apart. Two by four stringers are bolted to 5" x 5" concrete posts.



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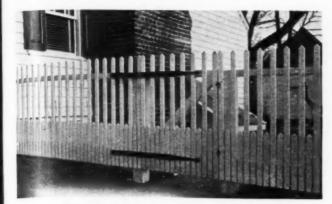
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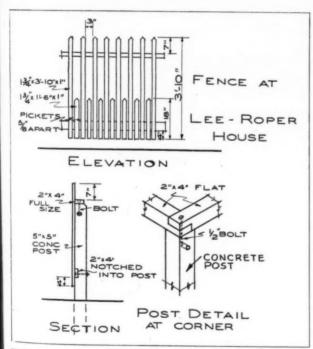
FULL SIZE

Like mod Lee Roper and closed stringers a square, po the wood they cannot When the





SLENDER PICKETS and long strap-iron hinges feature this front gate of the Lee Roper house. Pickets are 134" wide by 3' 10" high, and are spaced 5/4" apart at bottom. The fence is sturdily built as well as attractive.



FULL SIZED 2 \times 4 stringers are bolted to the 5" \times 5" concrete posts.

recent restorations the fences are of especial interest.

Like most of the Williamsburg fences, the gates of the Lee Roper house are hung on broad wrought-iron hinges and closed with a ball and chain. The posts to which the stringers are attached are of concrete and are usually 5" x 5" square, poured in rough board molds so that the grain of the wood shows in the concrete. When these are painted they cannot be distinguished from wood without a knife.

When the concrete posts are poured, the necessary bolts (Continued to page 150)

SPEED UP EFENSE



TS one-hand operation permits use of the other hand to hold insulation in place so that it can be tacked exactly in the position desired. No fussing, no fumbling, no "banged" fingers . . . just a trigger action and the insulation is tacked firmly. Staples driven flush . . . no tearing of the insulation.

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Under present conditions, Trimpak is the cheapest complete trim available.

Production has been increased sufficiently to take care of all requirements so that shipments can be made by your dealer in 30 or 60 days.

TRIMPAK CORPORATION
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TRIMPAK

Williamsburg Colonial Fences

(Continued from page 149)

are imbedded in them, or provision made for notches for the stringers.

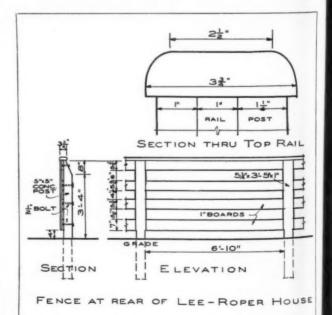
As a rule, the fence stringers are full 2 x 4's of rather rough lumber. In some cases the stringers are 2½" x 4½". Pickets also are of rough textured lumber and are a full 1" thick.

Study of the accompanying detailed drawings will show with what care the modern builders of Williamsburg have constructed these fences. We suspect that they are much





BACK YARD FENCE of Lee Roper house has charm and dignity, as well as great strength.



ONE-INCH BOARDS bolted to 5" x 5" concrete posts are used.

Top is capped with a 3%" rail. Bottom board is slightly wider than center.

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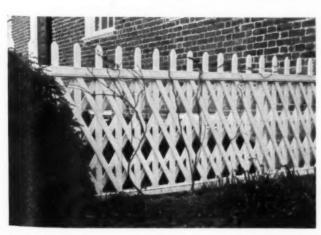
ly wider

more substantially built than the originals were—certainly this is true of the concrete posts. In the case of the front yard Lee Roper fence, the top 2 x 4 stringers are laid flat on the concrete posts and attached to the post with a ½" bolt. The stringers are lapped and notched where they join. The lower stringer is placed with the broad face to the street and fits into a notch in the concrete post. These stringers are also notched and bolted in place.

The accompanying photographs of the gates and fences surrounding the formal garden at rear of the Wythe house are of unusual beauty and interest but are of such intricate construction that they cannot be detailed here. With spring coming on almost any builder should be glad of an excuse to go to Williamsburg to obtain the details first-hand.







THREE VIEWS of the gates and fences surrounding the formal garden at rear of Wythe house in Colonial Williamsburg. This charming garden is made still more beautiful by the intricate patterned fences with unusual cross latticing. Gates are hung on sturdy wrought-iron hinges. This garden with its fences is one of the beauty spots of Williamsburg.

An architect shows how to have



OTTO TEEGEN, A.I.A., Architect ON A MODEST BUDGET



• Here's a kitchen designed by Otto Teegen, Director of Architecture of the Beaux Arts Institute, New York. All those luxurious tile effects...those smooth, smart upper walls and ceiling... that cozy breakfast nook... are made possible by two of today's most modern materials—Presdwood Temprtile* and Tempered Presdwood,* the Masonite* wood-fibre hardboards. Counter tops and recessed cabinet base-boards are Black Masonite Tempered Presdwood.



• Wainscot of Mr. Teegen's Masonite kitchen is Presdwood Temprtile with four-inch squares. The board is also available with eight-inch and twelve-inch squares. Its marble-smooth surface can be painted or enameled before or after the board is applied by nailing or adhesive. Upper walls and built-in cabinets are all Tempered Presdwood, which is especially suited for cabinet doors, because it will not warp, split or crack when properly used. Both boards are economical to apply. They can be cut to fit odd-sized areas with ordinary wood-working tools. Mail coupon for free samples and details.



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BEFORE MODERNIZING, Allentown's Young Building had this archaic look.

"Business as Usual" During Modernizing

Allentown, Pa., Office Building Completely Rejuvenated in Miracle Change-Over

THE home office of the Lehigh Portland Cement Company, known in Allentown, Pa., as the Young Building, needed modernizing badly. Yet the company kept putting off the job because there was no convenient place to which it could move the staff.

But along came J. A. Turner, hero of this story, who assured Lehigh's president, Joseph S. Young, that he could do the job without interfering with "business as usual."

The results, as far as the exterior of the building are concerned, are interestingly shown in the photographs above. Working on plans prepared by De Young & Moscowitz, New York architects, Turner Construction Company did a remarkable job of transformation, without, it is said, getting a single particle of plaster in the hair of a single stenographer. But it took some clever organizing.

How the Work Was Handled

The new building was given a handsome exterior of architectural concrete, enlivened with equally handsome aluminum windows. The finished concrete exterior is not painted or surfaced in any manner. Concrete was extensively used throughout the building on walls, floors, foundations and columns. Glass blocks were also used extensively.

The old structure had to be extensively enlarged. The two upper floors of the Young Building did not conform in ceiling height to the other five floors. It thus became necessary to transfer the office occupants of the sixth and seventh floors to

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MODERNIZED VERSION executed in architectural concrete, with aluminum corner windows.

other parts of the building and to demolish both these floors. A temporary roof was constructed on what was formerly the sixth floor level. The old elevator was lowered to serve the first to fifth floors and remained in almost continuous operation during the entire course of this particular phase of the building's construction.

A temporary partition was built four feet back of the original brick wall of the old building and the mechanics worked outside this partition on the construction of the new wing. Later, ten or twelve feet were also taken off the front of the old building and a similar partition erected, outside which the men worked during the time they were installing the new facade.

In the meantime, new columns had been set at separation points between the old and new sections of the building. As each new floor was finished, the partition was removed and the owner's operating force was shifted into the new section. Work was then started on the vacated areas.

Building Fully Air Conditioned

The building is fully air conditioned, affording a regular system of humidification and cooling for both the winter and summer seasons. Water required for the air conditioning is being obtained from an artesian well drilled to a depth of 450 feet below the basement mechanical room of the new section of the building.

A concealed, flush lighting system was designed to provide uniform light intensity throughout each department. Shadows have been reduced to a minimum. No hanging fixtures were installed.

Location of the lobby remains the same, although it has been completely reconstructed. Entrance doors are of Herculite unbreakable glass which obviates the use of metal door frames. The lobby floor is of Travertine stone with walls of Hauteville marble, and the ceiling is featured by a decorative lighting arrangement.

The new Young Building, it is pointed out, is in no sense a specialty building designed for a particular type of occupancy. It has been so planned that it can be easily converted into a general office building, if the Lehigh Portland Cement Company decides to move at some future time.





A typical YPS
 Kitchen ensemble
 Enameled steel
 cabinet sink, base
 and wall cabinets.

When one of your clients points to a swell picture in a national advertisement and blithely says: "Gimme" —it's pretty tough to have to explain that the 'dream picture' is far above the contemplated cost of this job.

YPS KITCHENS are nationally advertised and are priced to fit the budgets of ALL of your clients

Complete YPS Kitchen ensembles are available at about the price of a good, family-size refrigerator; separate units at correspondingly low prices.

Mass production makes these low prices possible. Furthermore, pre-assembled and factory finished YPS Kitchens can be delivered promptly and installed quickly, economically.

Yes, YPS National Advertising helps you because it creates desire for the YPS Kitchen your clients can afford.

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ADD Sales Punch | Porcelain Enamel Panels Used to Sheath Stations TO YOUR BASEMENTS

Try VENTO CHAMPIONS in the next house you build. Then devote two minutes to demonstrating the superior operation and superior construction of this window to your first prospects. Watch them spark to the ideal ventilation it provides; the versatility of its two-way opening; its practical puttyless glazing; its smooth, effortless operation, positive cam lock and weathertight construction. Like hundreds of other builders, you, too, will discover that with this window you can really capitalize on the present day interest in more livable basements, and create a favorable impression for the entire house. It's a valuable selling help that costs you nothing; for

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ACCESS to the Pennsylvania Turnpike, or "Dream Highway" as it has been recently publicized since its opening the latter part of 1940, is provided at Carlisle, the eastern terminus, Irwin at the west, and at eight intermediate points. At these points of exit and entrance which were selected to serve the major north and south routes which cross the line of the new highway there are ticket booths of novel building construction.

In keeping with the ultra-modern design of the highway, these ticket booths are designed throughout of modern building materials, utilizing porcelain enamel, steel, concrete and aluminum. Various considerations led to the selection of porcelain enamel as the exterior finish for the ticket stations. Its high degree of permanence when exposed to weather conditions, plus the low maintenance required to keep it clean and in good condition, combine to make porcelain enamel an economical sheathing for structures of this type. It is readily adaptable to modern architectural design and is available in any desired color. Further, porcelain enamel panels may be erected quickly, and an ingenious design was developed for the units used on the

turnpike ticket stations. Designed by the staff of Captain Gerald R. Tyler, chief architect of the Pennsylvania Turnpike Commission, the ticket stations consist of a structural steel frame made of 3" channels, completely finished on the exterior with architectural porcelain enamel. The interior walls are finished with 18gauge insulated steel sheets welded to the steel studs. These special "Paint-Bond" steel sheets are given two coats of oil paint after

erection to provide the desired neat, clean interior finish in the Each ticket office consists of a utility building structures. with the miscellaneous equipment necessary to the maintenance of the station plus necessary facilities for the collectors, and a huge canopy (shown in center illustration), 22 ft. wide and from 30 to 100 ft. long, depending upon the location, extending across the roadway. Between each incoming and out-going traffic lane is located a small ticket booth, 4 ft. wide and 12 ft. long, sheathed in porcelain enamel with the exception of a 4 ft. continuous window, designed to simplify the collection of tolls with a minimum of traffic delay. Provision is made for heating the ticket booths through ceiling grilles connected to the heating plant in the utility buildings by ducts running through the overhead canopies. Heat absorbing clear glass set in aluminum trim is used in the ticket booth windows. All windows in the utility buildings are equipped with projected steel sash made of special hot rolled steel sections.

The roof deck consists of 20-gauge copper-bearing Holorib steel roof deck, having 11/2" deep triangular ribs spaced 6" on

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center, and is attached to the structural framing by electric arc welding. Over this deck is applied 1" of insulation and a 20-year bonded built-up tar and gravel roof.

The architectural porcelain enamel panels were designed and manufactured by The Enamel Products Company of Cleveland, Ohio, and the Ingram-Richardson Manufacturing Company of Beaver Falls, Pa., respectively. The panels are unique in both design and application. Manufactured from 16-gauge U.S.S. Vitrenamel steel sheets, they are fastened directly to the structural steel frame of the buildings through 14-gauge steel plates tackwelded to the framing where four corners of adjacent porcelain enamel panels come together.

enamel panels come together.

The panels are 1" in depth and have a special flange design which acts as a water seal, preventing moisture from entering the structure without relying upon the caulking compound to seal the joints. Further, the system of construction is such that damaged panels can be removed with a minimum of effort and delay. This new system of design, worked out by the Enamel

Products Company, answers the problem of making porcelain enamel panel joints weathertight, as well as cutting down the time required for erection.

Soft blue and ivory, accentuated by the sil-

CONSTRUCTION view of framework; note canopy.

very aluminum trim, were selected by the Commission as the best colors for use on the ticket stations. These colors are in keeping with the state colors and

at the same time harmonize with the colors predominating in the natural settings of the stations. All vertical surfaces on the body of the buildings are finished in a "pebble finish" light powder blue porcelain enamel, while the canopy soffitt and faces are in ivory with a satin-matte finish.

Horizontal lines of the structures are accentuated by the use of 3 x ½" aluminum bands mounted on the porcelain enamel at the top and bottom of the 12" canopy faces as well as at the sill and head of the continuous windows used in the ticket booths. In addition to providing an absolutely maintenance-free exterior, the special enamel surface finishes developed by the manufacturers serve to eliminate highlighting, bowing, and irregularities that sometimes appear in high gloss surfaces.

It will be seen from detail drawings following that erection or replacement of enamel panels has been greatly simplified by panel design. This makes use of two basic types of panels, modified where necessary for corners and returns at windows or doors. One type of panel has turned-out flanges on three sides and a

(Continued to page 156)

SAME SIZE BALANCE

for Both Top and Bottom Sash



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EASIER TO FIT . . . Faster installation . . . Guaranteed performance

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drawings with and without weather stripping.

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Defense Bottleneck

BUT IT'S ALMOST AS IMPORTANT



Don't make your clients wait in line to use electricity. Make your homes livable.

THIS IS HOT NEWS

Here's an extra that will really sell homes. Electric outlets every 6 or 18 inches.

Investigate "Plug-In" Strip



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SIXTH STREET

PITTSBURGH, PA.

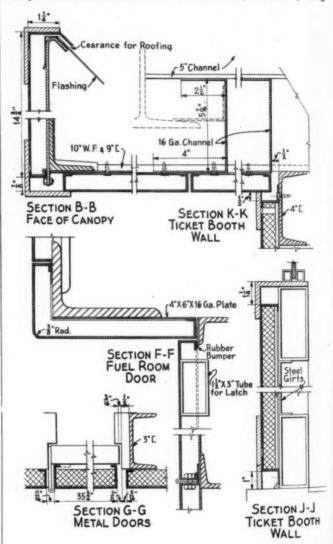
Pennsylvania Turnpike-

(Continued from page 155)

turned-in flange on the fourth. The mating panel, which is used on the sidewalls in conjunction with the other type, and exclusively for ceilings, has turned-in flanges on three sides and a turned-out flange on the fourth.

The size of the job and the simplicity of the panel design made it possible to fabricate the panels to harmonize in size and shape with the architectural design of the stations. No panel exceeds 8 sq. ft. in area, and the average is approximately $4\frac{1}{2}$ sq. ft. Panels are all individually formed on a press brake, working to an over-all flatness and dimensional tolerance of 1/16". Prior to enameling, all flange corners are welded tight and the positioning clips welded in place. The porcelain enamel consists of a ground coat fired on the Vitrenamel steel sheets at 1600° F. and two color coats, fired on at 1550° F. in electrically heated enameling furnaces.

In sheathing a side wall, panel erection starts at a bottom corner and proceeds in horizontal bands. The first step involves placing



a series of special clips in the concrete sill of the building. The lower turned-in flange of a panel is snapped in place under these clips, which holds the bottom edge of the panel firmly in place. The top flange is then attached to the $4\times6''$ 14-gauge steel plates on the structural frame by means of 10-24 self-tapping metal screws.

The mating horizontal panel, which has three turned-in flanges with clips welded in place on the end flanges, is slipped under the base clips and slid sidewise to engage its clips with the outstanding end flange of the preceding panel, the upper turned-out flange being attached to the 4 x 6" plates by self-tapping metal screws. The third panel, another turned-out flange unit, slides in place in the same manner, the base being positioned by the base clips and the vertical edge by the end clips on the preceding panel.

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Succeeding rows of panels are positioned by the clips on their lower turned-in flanges, which establish the horizontal joints, and by the flanges and clips on the edges, which establish the vertical joints. This series of constant overlaps prevents the entrance of water in the unlikely event of caulking failure. Care in the shop attachment of the clips assures uniform joint widths and at the same time greatly facilitates panel erection.

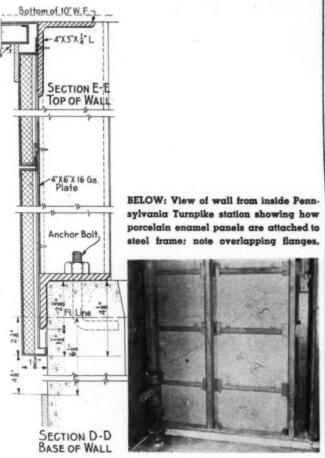
All clips are positioned in the shop and welded in place, being so spaced as to avoid interference with screw heads and the wall plates to which the panels are attached. Screw holes in the turned-out flanges of the panels are ¼ x ½" slots punched before the panels are enameled. Holes in the wall plates are hand punched

as the panels are erected.

Porcelain enamel panels designed for application immediately beneath the window openings are formed with a 100° instead of the standard 90° bend at the upper flange to aid in securing the desired weather seal.

Window frames are installed after the porcelain enamel panels are attached. In every case at doors or window openings, provision is made in the panel design to assure neat corners and provide for

IN opposite column and below at left: Section details of outside face of canopy, fuel room door in uitility buildings, wall of ticket booth, wall at roof, and base of utility house wall.



weather-tight construction. All joints are caulked with sealing compound to their full depth.

Effective insulation is provided in both the ticket booths and utility buildings by means of 3/4" pulp boards cemented to the exterior enameled steel panels and to the interior, treated steel sheathing sheets at the factory.

Under normal working conditions it takes an eight-man crew about four days to erect the steel work for one of the ticket stations. A six-man crew can apply the porcelain enamel panels, which cover approximately 2500 sq. ft. of side wall and ceiling area in the standard station, in four days. Another day is required for completely caulking and washing down a building. Four men can install the aluminum trim on a station in three days. It is (Continued to page 158)

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For the built-in modern kitchen. For electricity and every kind of gas. 6 styles and

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Approved by Underwriters', TVA, EFHA, REA, Edison Electrical Institute and Utili-ties. 13 styles and sizes, from 10 to 82 gallons.

←OIL-BURNING AUTOMATIC Perfect answer when neither gas nor electricity are avail-able. Yields 1531 gal. hot wa-ter for only \$1.00 (80° rise). 30 and 40 gallon capacities.

> HOTSTREAM "DIKIE" > Popular medium priced gas unit. 24 styles and sizes. Guar-anteed 10 years. Altogether Hotstream offers 205 sizes and styles of gas automatic water heaters, with guarantees of 5 to 20 years.

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For any kind of gas or electricity. Gle am in g white Dulux cabinet. For modern kitchen or finished basement. Guaranteed 10 years. 14 styles and sizes. This book will be an invaluable reference to you on the science of water heating. Write for your copy now.

←HOTSTREAM "CABINET"

THE HOTSTREAM HEATER COMPANY 8007 GRAND AVENUE CLEVELAND, OHIO .



It Can <u>Make</u> or Break Sales!

Successful builders give special attention to the styling and arrangement of the bathroom. For when prospects go over the house, the woman studies this room closely.

When you've installed *Formed* Iron Plumbing Ware, you can please her with smartly designed fixtures in white porcelain enamel or in gay colors. The high-luster surfaces are lastingly beautiful, easy to clean, and are acid-resisting at no extra cost.

If your Formed Iron Ware is porcelain enameled on Armco Ingot Iron, you can assure your prospects of the finest basic quality. They will *know* it, because twenty-seven years of national advertising have created a ready acceptance for this "world's standard enameling iron."

And here is another "house seller"—a new hotwater tank porcelain enameled *inside* on Armco Ingot Iron. The smooth, hard glossy surface keeps clear water *clear!* Write for the facts. The American Rolling Mill Company, 1121 Curtis Street, Middletown, Ohio.



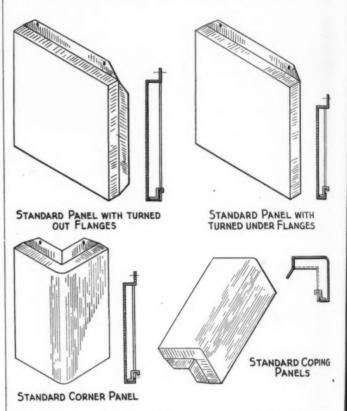
Pennsylvania Turnpike-

(Continued from page 157)

estimated that because of the simplicity of erection, due to the unique design of the standardized architectural porcelain enamel panels, it will cost about seventy-five cents a square foot "in place" for the porcelain enamel exterior finish as applied to the completed structures.

Although the porcelain enamel panels are highly resistant to damage, the fact remains that something may happen in almost any location which would necessitate replacing one or more panels. This factor was given careful consideration in designing the panels and, as a result, replacements may be made easily and quickly. All corner panels are removable from the top, by taking off the aluminum trim unit, removing the holding screws from the top up-standing flange and slipping the panel up about ½" so that the clips on the lower turned-in flange will disengage from the up-turned flange on the lower panel.

To remove a wall panel that has turned-out flanges on three



THE various types of porcelain enamel panel units used on the Pennsylvania Turnpike are detailed above in perspective and section.

sides, the nearest top corner panel is removed and then the top row of wall panels taken off until the row carrying the damaged panel is reached. Panels are then successively removed from the top down until the damaged panel is taken out. A new one may then be installed and the other panels replaced. In the case of panels with turned-in flanges, removal starts from the top and goes down the row to the desired unit. As it is only necessary to remove the two self-tapping metal screws from any panel to loosen it, one man with a screwdriver can handle a repair job without difficulty. Sections E-E and D-D, on the preceding page illustrate how erection or dismantling is provided for in the panel design.

Assuming that one of the inner panels in the bottom row of the roadway face of a utility building was damaged, it would require the removal of nine panels or less to replace a damaged unit. In the case of a damaged panel in one of the ticket booths, not more than three units at the most would have to be removed to permit replacing any damaged panel.

The ceilings on the under side of the canopies involve a slightly different type of construction than that utilized for wall surfaces. In place of the 4x6" plates welded to the wall frame members, special 16-gauge cold-formed steel channel sections are used on

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the canopies. These sections, which have a top flange of $2\frac{1}{2}$ ", a web of 6" and a bottom flange of 4", are bolted to the canopy frame members at right angles to the roadway axis. The other difference lies in the fact that all porcelain enamel ceiling panels are of the turned-in flange type, with only one turned-out flange punched to receive the attaching screws. Holes for the self-tapping screws are marked and hand punched as in the case of the side wall units, using the bottom flange of the special channels as the supporting plate. Sec. B-B clearly illustrates this construction.

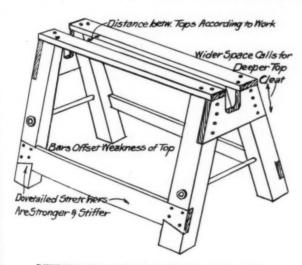
All panels were shipped by truck directly to the stations with the insulating material in place. Corners are protected by cardboard and packing pads and the panels are shipped on edge. Coping faces and enameled corner panels are wrapped in paper before shipping to prevent possible chipping or scratching.

Moyer Brothers Construction Company, Altoona, Pa., were the general contractors for the ten stations. Fusion welding was used extensively in attaching connection angles to beams and in attaching the steel deck to the supporting roof steel, as well as in making various shop connections in the plant of Griffith-Custer Steel Company, Johnstown, Pa., which fabricated the structural steel for the ticket stations. Carnegie-Illinois steel was used throughout.

Porcelain enamel is being more and more widely used for architectural effects in structures of all types. The turnpike ticket stations represent another satisfactory instance of its adaptability. Erecting crews and engineers alike are well satisfied with the ease and accuracy of installation of the panels used in the stations, and the finished appearance of the structures is meeting with highly favorable comment. Particular interest is noted on the part of motorists using the turnpike at night, their comments on the freedom from glare which characterizes these structures being particularly favorable.

Divided-top Sawhorse Has Many Uses

PIP sawing a considerable quantity of lumber, boring a large number of holes in line, many similar jobs which are necessary will be done better, quicker and easier if you make a couple of these divided-top sawhorses to rest such work upon. The space between the two tops, that is, the width of the open division, depends upon the nature of the work to be done; it can be made quite wide, up to 3 or 4 inches, or it can be extremely narrow, on the order of 1 inch. The top end cleats are cut down for the same reason, and in building such a horse, this depth should govern the total depth of the piece; if it is made shallow, the piece need



DIVIDED-TOP sawhorse handy for shop or job.

not be so very wide but if given considerable depth the end cleat must be proportionately wider.

The two iron bars and the dovetailed stretchers on each side are aimed to compensate for the weakness at the top which the division brings, making the sawhorse stiff and strong despite the divided top. However, the same idea can be used for light work, without either of these. They represent refinements rather than necessities.—MORRIS A. HALL, White Plains, N.Y.

ALLINONE



M HOURS EASIER TO INSTALL

DOLLARS EASIER TO BUY

X ONLY ONE UNIT TO HANDLE

Frantz has scored another hardware hit with the NEW No. 10 overhead door Unit (door and hardware complete). Simplicity of installation, combined with the advantages of pre-fitting for standard size openings (8' wide by 7' high)... new, lighter weight construction and pre-boring of holes for quick hardware fitting, have made it first choice with those who have installed it. In addition this new Frantz Unit is priced to "Mr. Averageman's" pocketbook. Write today for complete information.

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STEEL PANELS bolted together are used in two-family buildings for marines at Quantico, Va., seen under construction.

Panel Built Homes for Quantico Marines

NE hundred enlisted men of the Marine Corps Base at Quantico, Va., and their families, will soon be occupying the first homes in the defense housing program to be built of a prefabricated, welded steel panel framework. Sidewalls of these homes are asbestos shingles applied over an insulation board sheathing. Fifty two-family dwellings of this type are under construction.

The same system is being utilized in the construction of 100 twelve-family apartment building units for shipyard employees at Newport News, Va.

The houses feature a demountable steel frame under a roof of sheet steel panels, and adapt themselves to the defense housing requirements of speed in construction, standardization of design, and high salvage values in the event it should become desirable to dismantle and reconstruct them elsewhere.

Resting on a foundation and floor slab of poured concrete, the steel panels need only to be bolted into position, and can be completely erected from floor to finished roof in 80 manhours, meaning that a 10-man crew can complete the entire steel superstructure of a two-family dwelling in a single eight-hour day.

The floors will be finished with a one-eighth inch asphalt tile laid over the concrete. The houses are 48 feet wide across the front and 28 feet from front to rear. They are divided into two apartments having over-all dimensions of 24 by 28 feet. Each apartment consists of living room, combination kitchen and dinette, two bedrooms and bath. Each of the bedrooms has a large closet, with additional closet storage in hall and kitchen.

Each of the double housing units requires approximately six tons of steel, which is fabricated in the plant and protected from corrosion by galvanizing and baked-on finishes. The material reaches the job ready for erection, needing only to be holted into place by the work crew

bolted into place by the work crew.

At Newport News, Va., where increased housing facilities are needed for shipyard workers, the same steel construction, known as the Panelbilt system, is being used. One hundred apartment buildings, each having 12 units, will be erected, providing living quarters for 1,200 families. The buildings, two-story, will be 156 feet long and 32 feet deep. Each will consist of six one-bedroom and six two-bedroom apartments.

By utilizing the four-foot module steel panel design, high salvage values are provided, because the steel panels and frames can be re-erected at other locations in any arrangement of rooms having dimensions in multiples of four feet, after their usefulness at any one point has been achieved.

These houses, at Quantico and at Newport News, Va., are

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CLOSEUP of two-family Quantico home, showing asbestos cement shingles being applied to insulating board over steel frame.

being built under a contract with the Bureau of Yards and Docks, Navy Department. The steel panel system being used in their construction is supplied by the Tennessee Coal, Iron and Railroad Company, United States Steel Corporation subsidiary at Birmingham, Ala., which developed the Panelbilt system of steel home construction.

Construction details include the following:

STEEL FLOOR JOISTS—Steel floor joists are spaced 4' on centers extending across the building at panel joints. Joists are bolted to the tops of the steel piers or other materials when used. The joists are two cold formed channels placed back to back and spot welded together and shop coated with a heavy asphalt paint. When concrete or other types of floor and foundations are desired, the steel foundations or floor joists are not used as the case may be.

EXTERIOR WALL PANELS—The wall panels are fabricated building units of standard 4' widths by 8' 7½" high and other heights as required. The steel frames are made of cold formed channels and angles with all connections shop welded. Panels are made solid; with door openings and with windows.

The door panels are provided with a steel casing ready to receive a wooden door. Window panels include steel casement windows welded into the panel, flashed and ready for erection; metal frames, screens and hardware are furnished with the window panels. There is a selection of door sizes and various sizes and types of steel windows. The exterior coverage attached to the frames by shop welding is 26 gauge galvanized box rib steel (Continued to page 162)









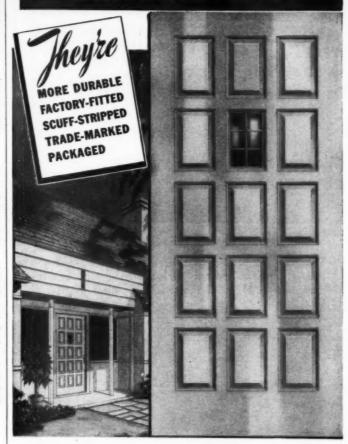
GABLE PANELS are of light steel. At left is wall section with steel window welded in place. In center is interior partition Panel, and at right is shown typical door panel with steel frame.

Easier to install ...longer lasting!

TRUFIT

Durable Douglas Fir

Entrance Doors



▲ Tru-Fit Douglas Fir Entrance Door is a quality door in every respect. In strict accordance with U. S. Commercial Standard CS91-41... it is built by skilled craftsmen and precision tools from durable Douglas fir, the wood that lasts longer... then pre-fitted to save you time and work. Scuff-stripping and packaging assure your receiving a Tru-Fit Entrance Door in the same perfect condition that it leaves the mill.

One of the 27 Tru-Fit Entrance Door designs is exactly right for every style and size of house you build. These beautiful doors add both appearance and value to your homes . . . help make sales . . . give more customer satisfaction. Order from your dealer. And remember, the trade-mark is your guarantee of a genuine Tru-Fit Douglas Fir Entrance Door.

* You can order all stock Douglas Fir doors pre-fitted at slight extra cost and grade-marked.

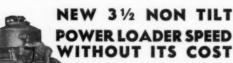
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Please se	nd me your free	color ca	atalog of	Douglas F	ir Doors.

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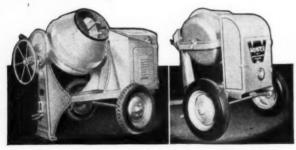




Waste no time -load while mixing. New, more compact design-lower charging height. Choice of power-optional husky air or water cooled engine. 100% Timken equipped. The best

SMALL non-tilt mixer buy today.

Wonder Trailers—always first choice in small job mixers. Streamlined and perfectly balanced. See the complete new line in the small job mixer section of CMC's new catalog.



This famous Wonder Trailer now available in 5S as well as 3 1/2S sizes. Compact side discharge and end Discharge models in

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See What's New and Best in Concrete Mixers-Plaster and Mortar Mixers, Batching and Placing Equipment, Pumps, Hoists, Power Saws, Carts and Barrows.—Write.

CONSTRUCTION MACHINERY COMPANY WATERLOO, IOWA

(Continued from page 161) Panel Built Homes-

sheets with a cover rib at joints of panels and corners of the building. Wooden nailers are provided for baseboards. Gable panels of similar construction include a ventilating louvre at the peak of the gable with screen wire inside.

PARTITION PANELS—Partition panels are made of cold

formed steel channels with connections spot welded. Door openings are arranged to receive wooden or steel frames. There are wooden nailers for the baseboards. Rooms are arranged to owner's convenience within standard limitations.

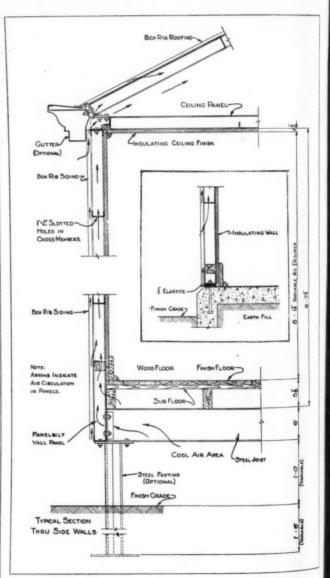
GUTTERS-Moulded gutters are attached by bolts to the eaves of the building with suitable down pipes. The gutters are a part of the house trim and decoration.

PORCHES-Porches of the same construction as the house are available as an extra. There are several designs and sizes which may be bolted on to the building at any location. Clips are provided for attaching screens to enclose the porch.

STEEL CHIMNEYS—Steel chimneys and steel flues are

available as an extra in either single or double units. Flues may stop at the ceiling line to receive kitchen stove or circulating heater pipes, or may be used with a steel fireplace unit.

STEEL FIREPLACE UNIT-A complete steel fireplace unit is available as an extra. This cabinet is all metal with a steel fireplace set inside. The hearth is a steel tray lined with brick on which is set either grate basket or andirons. Grilles are provided in the base of the cabinet for the entrance of cold air which, when warmed, passes out of grilles at the top of the cabinet, thus circulating the air and heating the entire house.



STANDARD PANELBILT construction details for use in typical homes. Inset shows concrete floor method as used at Quantico.

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Revised Oak Flooring Commercial Standard

RECOMMENDED revision of grading rules submitted by the National Oak Flooring Manufacturers' Association and endorsed by the standing committee was circulated on September 16, 1940, to the trade for written acceptance. The trade has since accepted and approved for promulgation by the United States Department of Commerce, through the National Bureau of Standards, the revised standard as follows in briefed form.

The standard became effective for new production on February

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Quantico

Purpose

1. This standard for white oak and red oak flooring is a basis for common understanding between manufacturers, distributors, and users of this product. By its general acceptance, use, and certification by labels, it is hoped to increase interest in the manufacture, sale, and use of oak flooring manufactured to standard grades to the mutual advantage of all concerned.

2. The service and satisfaction afforded by oak flooring, and consequently the success of the industry, depend on the use of universally recognized grades, and, therefore, the following commercial standard is provided for guidance in the manufacture,

sale, and use of this product.

Scope

3. This standard provides minimum specifications for three grades of quarter-sawed and four grades of plain-sawed white oak and red oak flooring. It covers standard dimensions for length, width, and thickness of tongued and grooved, and squareedge strip flooring. It also covers defects, bundling, inspection, and a method of certifying compliance with the standard.

General Requirements

4. All commercial standard oak flooring, except square-edge strips, shall be tongued, grooved, and end-matched in accordance with the standard dimensions shown in Figures 1, 2, and 3. It shall be well manufactured and shall comply with the specifications herein contained.

Detail Requirements Quarter-Sawed Grades

5. Clear.—The face shall be practically free of defects, except that $\frac{3}{6}$ inch of bright sapwood will be permitted. The question of color shall not be considered. V Bundles shall be 2 feet and up in length, not to exceed 20 per cent under 4 feet. Average length 5 feet.

6. Sap clear.—The face shall be practically free of defects, but unlimited bright sapwood will be permitted. The question of color shall not be considered. V Bundles shall be 2 feet and up in length, not to exceed 20 per cent under 4 feet. Average length 5 feet.

7. Select.—The face may contain sapwood, and will admit pinworm holes, streaks, slight imperfections in working or a small tight knot, not to exceed one to every 3 feet in length. Bundles shall be 2 feet and up in length. Average length 4 feet.

Plain-Sawed Grades

8. Clear.—The face shall be practically free of defects, except that 3/8 inch of bright sapwood will be permitted. The question of color shall not be considered. V Bundles shall be 2 feet and up in length, not to exceed 20 per cent under 4 feet. Average length 5

9. Select.—The face may contain sapwood and will admit pinworm holes, streaks, slight imperfections in working or a small tight knot, not to exceed one to every 3 feet in length. Bundles shall be 2 feet and up in length. Average length 4 feet.

10. No. 1 Common.-Shall be of such nature as to enable the laying of a sound floor without cutting. Bundles shall be 2 feet

and up in length. Average length 3 feet.

11. No. 2 Common.—May contain defects of any character, but shall be of such nature as to enable the laying of a serviceable floor. Bundles shall be 11/4 feet and up in length. Average length 21/2 feet.

V This applies to standard grades. Flooring separated for color can be obtained as a special by adding color requirements to above specifications.

(Continued to page 164)



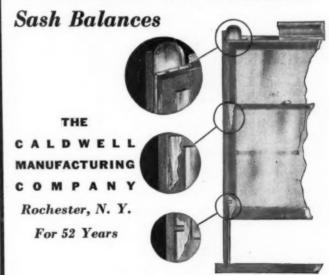
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SAVE on Low Installation Cost

WHEN you use the CALDWELL 142FT SASH BALANCE, you not only equip your windows with the strongest and most compact balance on the market, but you effect a substantial saving in labor costs. This CALDWELL balance is fitted in twothirds of the normal time. All you do is to lock the spring by pulling out tape and insert a nail in the face plate (an exclusive CALD-WELL feature), then hook the tape to sash. Only one screw driven.

Expressly made for unit windows—such as the full jamb type illustrated-the CALD-WELL 142FT comes with kink-proof tapes, enclosed mechanism, metallic lacquer finish, plus all the well-known CALDWELL features. Its durability and unique smoothness in operation make CALDWELL an easily demonstrated "plus value" that your customers will be quick to appreciate.

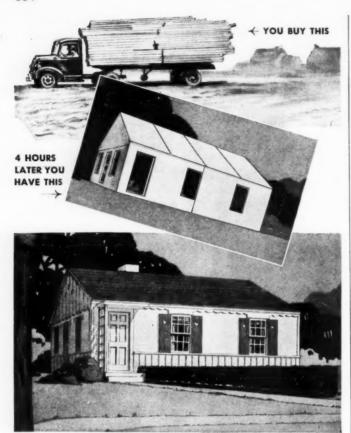
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Gentlemen: Please send me complete information about
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THE PRECISION-BUILT JR. System of Construction provides the ideal technique for your low-cost housing problems. It gives you the turnover vital to successful operation—through complete cost control and engineered construction speed.

73 fabricators can now furnish you with all the house parts, except utilities, on 24 hours' notice. The fabricator's truck delivers to you one package—which includes floors, walls, ceilings, roofing sections and all exterior and interior running trim and millwork.

In 4 hours, with two carpenters and four laborers, the house is under roof. In 4 days, your customer moves in. The house is eligible for F.H.A. Insured Mortgage Loan, with construction tested by the Bureau of Standards. Most important—you know at all times exactly what your final cost will be.

The Precision-Built Jr. package you receive from your fabricator includes all materials except heating, plumbing, electrical wiring and painting. You are sure of the cost of these items, because they are installed on subcontract bids. Erection and finishing out time are your only other "cost"

Write for your copy of this FREE book of complete construction details question. Years of experience enable us to tell you the maximum labor hours this part of the work would take, under the worst possible conditions. By estimating on the basis of maximum hours, you will find your actual cost lower.

Through Precision-Built Jr. Construction, you provide your customer with the maximum of comfort. You give him a home doubly insulated with Homasote walls, with Homasote insulating floors, ceilings and roofs. You give him a home so snug, only the smallest heating system is required. Uncertain cost control—the last "if" in small-home construction—has been eliminated by Precision-Built Jr. Construction. Speed heretofore unknown in the building industry gives you greater merchandising facilities than your competitors. We invite you to write for the full details. HOMASOTE COMPANY, Trenton, New Jersey.



Weatherproof
HOMASOTE
Insulating and Building Board

Oak Flooring Commercial Standard

(Continued from page 163)

Square-Edge Strip

12. Square-edge strip flooring is manufactured in "Clear," "Select," and "No. 1 Common" grades. The grading requirements shall be the same as those for like grades of quarter-sawed and plain-sawed flooring, except that bundling and lengths shall be as follows:

Clear.—Bundles shall be 3 feet and up in length. Average length 6 feet.

Select.—Bundles shall be 3 feet and up in length. Average length 5 feet.

No. 1 Common.—Bundles shall be 2 feet and up in length. Average length 4 feet.

Standard Thickness and Widths

13. Tongued, grooved, and end-matched.

Thickness	F	ace	Widt	h
(inch)		(ine	ches)	
25/32	11/2;	2;	21/4;	31/4
15/32				
11/32	11/2;	2		

14. Square edge.

Thickness		F	ace W	idth		
(inch)			(inche			
5/16	; 1;	11/8;	11/4;	1-1/3;	11/2;	2

Also made rough back 11/32 inch thickness; $1\frac{1}{2}$ inch and 2-inch face.

All faces shown above in 5/16-inch square-edge flooring are finished 1/64 inch over face.

Bundling

15. Oak flooring is bundled by averaging the lengths. A bundle may include pieces from 6 inches under to 6 inches over the nominal length of the bundle.

16. The percentages under 4 feet referred to in this standard apply on total footage (board feet) in any one shipment of the item.

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17. Thickness.—In computing the footage of standard oak flooring, a thickness of one inch shall be used.

18. Width.—Tongued and grooved flooring 25/32 inch thick is counted as 34 inch wider than the actual face width, while flooring 15/32 inch and 11/32 inch thick is counted as ½ inch wider than the actual face width. Square-edge strip flooring shall be measured as of the actual face width.

19. Length.—The length of end-matched flooring is counted as 34 inch longer than the actual length.

Inspection

20. Utmost care is exercised in the manufacture and inspection of oak flooring and although the most capable grading experts are employed to assure constant uniformity of standard grades, it must be remembered that they are dealing with a product of nature in which there will occasionally appear marginal pieces on which the judgment of two equally competent inspectors might differ.

21. The purchaser may refuse any shipment in which the total footage of subgrade pieces is in excess of 5 per cent of the grade in question, as determined by official reinspection.

Reinspection

22. If the reinspection results in a difference in favor of the purchaser of more than 5 per cent in feet (board measure), as shown on the invoice, then the shipper shall pay all the expenses of reinspection. If on the other hand the difference is only 5 per cent or less in feet (board measure), the purchaser shall pay all the expenses of reinspection.

23. The quality and condition of oak flooring as it leaves the manufacturer is held to govern the reinspection.

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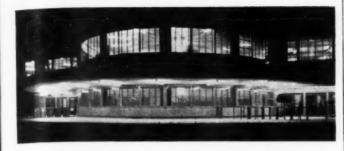
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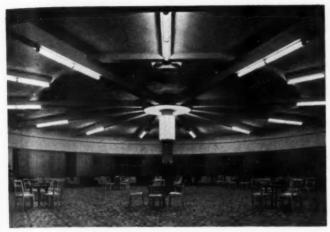
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TOP: Front entrance to clubhouse and Turf and Paddock Club illuminated by fluorescent lights. ABOVE: Circular lounge in Club.

Lots of Light on "Dark Horses"

IN what is believed to be "the best lighted horse racing establishment in the world," fluorescent lamps in new fluted translucent glass fixtures help to light the lounges, bars and club areas of the new Golden Gate Turf Club at Albany, Calif.

A total of 97 Westinghouse fluorescent lighting fixtures, each containing two 40-watt fluorescent lamps together with 40 others containing one lamp each, provide soft, even, glare-free light in the exclusive Turf and Paddock Club, the Clubhouse, lounges, dining rooms and promenades.

Grandstand, kitchen, second balcony, ground floor areas and several stairways are lighted by a total of 240 shallow dome reflectors, and 500-watt incandescent lamps; 70 similar but smaller

reflectors and 200watt lamps provide light for one promenade, men's rest rooms, jockey room, a group of betting booths and the first balcony. Offices are lighted by a total of 33 Westinghouse Magnalux luminaries with 500-watt incandescent lamps. Light for ladies' rest rooms, powder rooms and halls is provided by 24 similar fixtures with 200-watt lamps.

AT counter level, in Turi and Paddock Club, illumination averages 8 foot-candles.





TO MAKE IT A "COMPLETE HOME"

give it a NUTONE DOOR CHIME!

The most effective "package selling" includes these beautifully designed, melodious Chimes right in the specifications

New small home prospects, from obsolete houses and apartments, long for the conveniences and modern equipment of an up-tothe-minute home. So—they're a big market for beautiful NuTone Door Chimes!

These easily installed, handsomely styled Chimes have everything to delight the prospective home owner. Suitability and decorative charm for any room in the house. Wonderful tonal resonance.

NuTone Chimes come in various designs. The popular Mt. Vernon is entirely of tarnish-proof brass. Others have long brass tubes and handsomely embossed covers of the new, unbreakable plastic. Still others are in baked enamel. Some have an interior light.

All NuTones are two-door Chimes—two melodious notes for the front door, one for the rear. Some have Westminster Chimes and sound an extra note for the side door. Shown

here are a few NuTone models. There is one for every income, every type of home—priced \$1.95 to \$29.50.

We invite correspondence from specifiers of materials and equipment for small homes, and will gladly send catalog 4023E.

NUTONE CHIMES, Inc.

CINCINNATI, OHIO

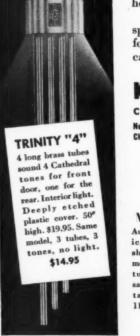
New York, 1150 Broadway
Chicago, Merchandise Mart
Toronte, Crown Bldg.

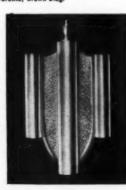
MT. VERNON

Authentic American Colonial shield of hammered brass. 3tube effect of satin brass. All tarnish-proof. 11¼" high.



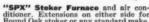














"XB" Oil Furnace performs all functions of heating and air conditioning. Complete with Round Oak's oil burner.



Gas Fired Winter Air Conditioner. A neat, compact unit Completely automatic. Quiet



Blended - Iron Gravity Furnace. Low in cost, leader in the "small budget" home market.

ALL TYPES OF FURNACES AND AIR CONDITIONERS FOR ALL TYPES OF FUEL

Regardless of the size or cost of the homes you build.. no matter what type of fuel is preferred.. there's a Round Oak heating and air conditioning unit to meet every requirement. And the selection of Round Oak heating will be a lasting service to your customers, for this famous line (backed by an enviable 70-year record) is guaranteed to give satisfactory, trouble-free service year after year.. with minimum attention. It will pay you to learn all about Round Oak heating. See your Round Oak dealer or mail coupon.



Rely On Your ROUND OAK Dealer



ROUND OAK

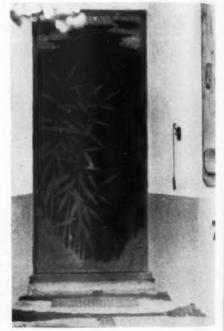
of Dowagiac, Mich.

STOVES . RANGES . FURNACES . OIL BURNERS . AIR CONDITIONERS . STOKERS

The Round Oak Co Please send me com	mpany, Dowagiac, Michigan — Dept. AB-4.
☐ Stoker Fu	rnaces Gas Fired Air Conditioners
Name	
Street	
City	State

Decorative Entrances and Flower Boxes and Pot Holders from California

FOR the builder or designer looking for the novel decorative touch on modern, rustic or traditional styled homes, some of the photographic details presented below and in the opposite column may offer just the idea to be adapted to some current job. This collection includes unusual doorways, flower boxes and flower pot holders found in California, and supplements the collection presented in the March issue of American Builder. For the most part, the construction is simple and uses a standard material for the base, such as the stock doors which have been decorated with a pattern in wood or metal; the boxes are easily built.—Hi Sibley.



RIGHT: A most interesting effect is secured with this screen door to which a graceful bamboo pattern of hammered sheet copper is attached.



DOUBLE brackets at each end support this dormer window box.

RIGHT and on opposite page: A simple flower pot shelf
for a modern window; brick sill ledge
extends beyond bay
window for pots; reduced to simplest
elements, belowwindow flower pot
holder.



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FOR a rustic beach home, the flower box at the left with a scalloped face board fits well into the design.

RIGHT: Giant spider web of round iron welded together and painted white, and 10 in. spider of hammered brass on entrance door of East Pasadena, Calif., home. The flies caught in the web are of wrought iron and are 4 in. long.





THIS door is decorated (not too successfully) with hammered iron hinge straps supplementing the other hardware.



Imericant HIGH SPEED Machines will make YOU MORE MONEY



AMERICAN FLOOR SANDERS

There is a big demand for men with modern, high-speed American floor sanders and here is your chance to be your own boss and make big money. As much as \$25.00 a day is not an unusual amount for the floor surfacing contractor to make. American offers you the most complete line of floor machines from which to choose—high-capacity, powerful twelve inch sanders down to smaller sizes for occasional sanding during building construction. There are more American sanders being used in the Defense Housing Program than all others. Choose the favorite of contractors for years—AMERICAN time and money-saving floor sanders. Investigate the wonderful possibilities of this work today without fail.

AMERICAN SPINNER EDGER

Here's a real money-maker and time-saver-the American Spinner for edging and matching the borders with the body of floor work. This is also an excellent machine for stair treads, halls, closets, landings, display windows and other hard-to-get-at places. The patented design and construction of this disc type edger makes it a favorite with the professional floor trade.



AMERICAN PORTABLE SAW

Slow hand methods on Slow hand methods on many jobs can be replaced by this speedy, electric portable American Saw. Labor saved by this saw will run into hundreds of dollars yearly.

SEND COUPON NOW

If you are at all interested in getting into something for yourself and getting out of the "old rut" or if you want to increase your profits in your present business, sign and send in the coupon below. There is no cost or obligation to you. Be sure to check the kind of machine you are most interested in on the coupon below.

AMERICAN	FLOOR SURFACING MACHINE COMPANY
SIL SO ST CLAIR ST	TOLERO OMO

Gentlemen: Without	cost or obligation send complete prices on the following:
☐ American	Ploor Surfacing Machines.
	Spinner Edger Machine.
	Portable Saw.
☐ I want to	get into something for myself.

American Floor Surfacing Machines. American Spinner Edger Machine. American Portable Saw. I want to get into something for myseli		
I already own one, quote trade in valu	(make and year	rs old)
Name	***************************************	********************************

State

WORRIED ABOUT WALLS?





NEXT time you have a wall worry—when you want something different, something stylish, something practical . . . yet something that won't boost your building cost—try TEMLOK DE LUXE!

This permanent insulating interior finish will do several important jobs for you . . . at one reasonable cost. It insulates efficiently—a fuel-saving and comfort advantage your clients will appreciate. The

factory-applied, fadeproof colors, and the panels, planks, and boards available give you unusual scope for decorative expression! Then you get high light-reflection and a helpful degree of noise-quieting, too—both practical "plus" features of this versatile material.

Here's another advantage of Armstrong's Temlok De Luxe, especially vital nowadays—IT SAVES BUILDING TIME! Buildings are often finished weeks sooner because there's no waiting for new plaster to dry—no need to remove old

It's easy to create customer-attracting wall beauty with Armstrong's Temlok De Luxe. In the Tots and Teens Shop, Dallas, Texas, 10° Temlok De Luxe Planks in three colors make a decorative, as well as a practical wall. The white Temlok Panels on the ceiling have unusually high light-reflection value. Temlok sold by: Nolan-Browne Building Materials Co. Architect: F. J. Woerner & Co., Dallas.

plaster in remodeling work. When Temlok De Luxe is erected your interior is ready for occupancy. Get the full facts now which prove it pays to Try Temlok De Luxe. See "Sweet's" or write to Armstrong Cork Company, Build-

ing Materials Division, 979 Concord St., Lancaster, Pa.



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ARMSTRONG'S TEMLOK INSULATION

De Luxe Interior Finishes . Lath . Sheathing . Hardboards . Monowall

PRODUCERS TELL US-

About Products, Personnel, Plants

Advertising Campaign Announced by N. D. M. A.

AN educational campaign of advertising and publicity has just been announced by S. O. Hall, secretary-manager of the National Door Manufacturers Association, Chicago. The purpose of this program is to acquaint all trade factors with the N.D.M.A. Seal of Approval which signifies that woodwork bearing this seal has been given a toxic treatment meeting N.D.M.A. preservative minimum standards. The campaign emphasizes the fact that through the application of this treatment wood is even better able to resist the severe service conditions imposed by modern construction.

In a recent interview, Mr. Hall said:

"The Seal of Approval translates the work of many years in universities, research laboratories, and field-testing, into a practical device to protect the public interest. Many scientists and technicians have been engaged in this project. The Seal of Approval was developed in 1938 and offered to manufacturers of woodwork, who agreed to comply with these minimum standards of toxic-preservation-treatment. Licenses have been issued to approximately 50 manufacturers of doors, windows, frames, screens, shutters and blinds. Inspection of the mills and factories involved has been perfected by the National Door Manufacturers Association. Much progress has been made in the past three years to increase the durability and long life of these wood products which have long been so popular with both the trade and the home-owning public.

"A recent survey made by an outstanding statistician in the building industry, clearly indicated the public desire for knowledge on this point. The survey also showed that much confusion existed in the public mind—possibly as the result of claims by competitive materials, seeking to capture a part of the traditional

market for woodwork.

"The advertising campaign which will begin in April is a continuing program, strictly educational in purpose and nature. It is designed to reach architects, contractors, builders, dealers, jobbers, financing agencies, and all factors which constitute the building trade."



S. O. Hall, secretary of the National Door Manufacturers Association, and its Seal of Approval.

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Ceco Steel Products Expands

FOR the third time since its manufacturing plant was established in Chicago two and one-half years ago, Ceco Steel Products Corporation has completed an addition to its plant facilities to meet the growing demand for its products.

The latest expansion, an addition that increases its capacity 50 per cent, was made necessary principally because of the growing demand for Ceco steel windows and the recent addition of a Bonderizing plant for binding the baked enamel finish on steel windows. This process gives greatly added protection to the finish by tightly binding the enamel to the steel and materially reducing the need for repainting during the life of the structure.



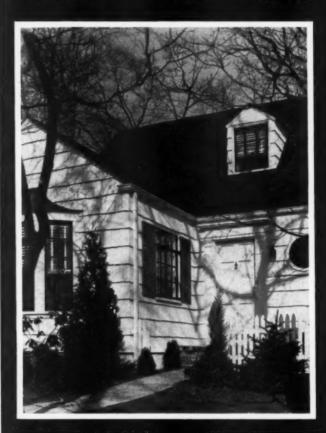
FIRST three sections of Ceco's new plant addition.

HOPE'S

BONDERIZED STEEL

WINDOWS

1818 The Name Guarantees 1941



Residence, Norgate-at-Roslyn, L. I., N. Y. G. A. Mezger & Co., Builders

HOPE'S WINDOWS

Make an Important Contribution To the Low Cost of Good Building

• In 46 low cost housing projects over \$900,000 was saved by using steel windows.

But it is still more important that years after the construction is completely amortized Hope's Windows remain in perfect condition and their maintenance costs nothing but their small share of ordinary painting.

The record of this company, covering more than a century of experience, is your assurance that these benefits are real.

Write for catalog 68ABA

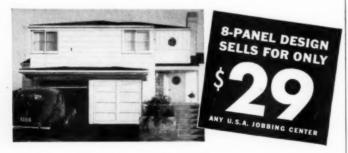
HOPE'S WINDOWS, Inc,

Jamestown, N. Y.



That's why this overhead-type garage door is so popular!

USE IT ON NEW AND OLD GARAGES!



● Every car owner wants the convenience of an overhead-type garage door . . . one that costs him little to begin with . . . then presents no operating or servicing problems. The Craw-Fir-Dor gives him everything he wants . . . and more! This tested, approved door is built of durable Douglas fir. It comes packaged with extra strength hardware and a free-spinning automobile trunk-type lock. It is pre-fitted for an 8′ x 7′ opening and can be installed by any carpenter in less than half a day.

The 8-panel design retails for only \$29 in any U.S.A. jobbing center. The new flush design, which is reversible and comes with a bundle of moulding to be applied in any desired pattern, sells for just \$1 more. The two 16-panel designs are just slightly higher. See your dealer today. He handles Craw-Fir-Dors or can get one for you quickly. For FREE BOOKLETS, write Fir Door Institute, Tacoma, Washington.

Now nationally advertised in American Home and Better Homes & Gardens



For special residential or industrial installations, write Crawford Door Co., Detroit, Mich., who make a complete line of sectional overhead-type doors.

Trinity Portland Cement Co. Now Manufacturing White Portland Cement

T has just recently been announced that the Trinity Portland Cement Company, Dallas, Texas, is now engaged in the manufacture of white portland cements, plain and waterproofed. These products will be manufactured at the company's Houston,

Texas, mill and will be distributed throughout the entire country as well as to foreign markets.

Sales of these cements will be under the immediate direction of Paul F. Keatinge, long identified with the white cement business and well known to architects, contractors, and concrete products manufacturers. He was formerly a vice president of the Producers' Council, Inc.



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PAUL F. KEATINGE

Blow Torch Tests Concrete Block

A DEMONSTRATION attracting a great deal of attention and creating considerable comment at the Concrete Industries Convention, held at the Sherman Hotel in Chicago Feb. 10-12, was a concrete block kept under the blast of a blow torch hour after hour, for the full three days, with no damage to the block itself and with very little perceptible heat within the core. Practically every visitor who passed the exhibit stopped to insert his hand into the core immediately behind the glowing surface just to convince himself it was no illusion, and that the heat from the outer surface did not pass through.

This block was an ordinary 8 x 8 x 16 unit cast with Celotex's Lightweight Aggregate, Pottsco, which is made by expanding molten blast furnace slag. Since the expanding process begins with the slag at 2400 degrees Fahrenheit, there is no residue of combustible material left in the finished product. During expansion, millions of tiny, insulating, dead air spaces are formed.



CONCRETE block of "Pottsco" Lightweight Aggregate resists blow torch heat at Chicago Concrete Convention.

Two Water Heater Lines Announced

TWO 1941 lines of electric water heaters, with double action automatic thermostatic controls, are now being produced by the Range and Water Heater Department of the Westinghouse Merchandising Division in Mansfield, Ohio; price ranges on both the

Olympian models and the new Special line have been reduced.

The Olympian line of square, round, and table-top models incorporates all the latest engineering advances in water heating construction. An exclusive feature of the Olympians is the handy cleanout opening for easy removal of sediment and lime deposits where there are difficult water conditions. All Olympian models are equipped with copper hot water lines, assuring dependable service for many years.

The thermostats have a double snap-acting structure to operate switching contacts, accomplishing high wattage switching whether the load is slight or great. Olympian square cabinet models come in 30, 40, and 52 gallon capacities; table-top Olympians have 15 and 30 gallon tanks, and the round Olympians 30, 40, 52, 66, 80,

and 120 gallon capacities.

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The Special line consists of round models with capacities of 10, 30, and 52 gallons, and a table-top 30 gallon model, all of which are designed to solve household water heating problems with the least capital outlay and maintenance cost. These heaters have standard Westinghouse thermostatic controls, Corox economizer heating units, Palco Wool insulation and a scientific cold water baffle which prevents temperature drops from incoming water. These Westinghouse water heaters combine beauty with maximum utility, being finished with high temperature Dulux baked on bonderized steel.

In conjunction with a new selling and advertising program to develop water heater sales prospects, Westinghouse distributors are

furnishing dealers with the X-Ray Visualizer Sales Presentation. This book enables the prospect to see what is inside the water heaters, and sales literature, display aids and a full explanation of the new Westinghouse Informative Label. the new consumer's buying aid, will accompany it.

OLYMPIAN square electric water heater, 52 gallon capacity, shown in a kitchen installation.



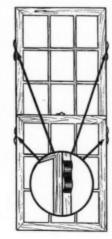
New Window Spring Speeds Construction

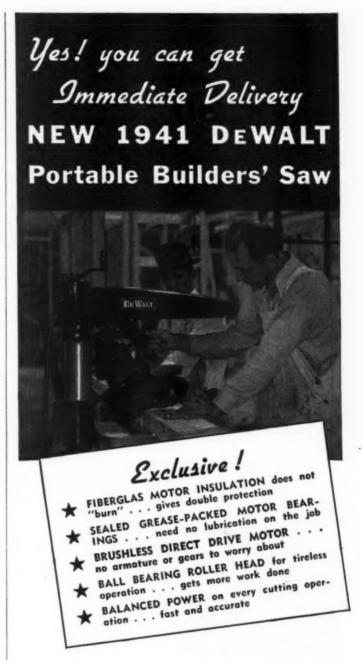
MORE than thirty U. S. Army Camps, hospitals and airports are going up faster and at a lower cost to taxpayers because War Department engineers have approved the use of the Jiffy window control spring—an economical and efficient window spring which actually saves money on the cost and application of barrel bolts while allowing the same freedom of opening and closing for double-hung wood windows that weights and pulleys provide. It is distributed by Dodge Sales Co., 519 N. 66th Street, Milwaukee. Army construction superintendents were quick to see that this

simple device would help them fulfill their contracts on time. Approximately 16 minutes of labor time are saved on each window, 10 labor hours on the average barracks

building, by the Jiffy window control spring. The Jiffy window control spring can be applied on new construction by anyone able to drive two brads. Four Jiffy springs are applied to each window between the edge of the sash and the jamb—one on each side of both the upper and lower sash. They provide a constant pressure which holds the sash firmly in any position, but which permits easy raising and lowering. It is not necessary to plough out, mortise or recess to install these springs.

WINDOW control springs attach to sides of sash as shown.





Try this new 1941 DeWalt and you'll get a portable builders' power saw which surpasses all previous levels of performance in the lower-priced field. It gives you the fastest... most accurate ... and lowest cost method of cutting material on your job!

Let us help you earn greater profits! Call in your local DeWalt dealer for a demonstration on your job . . . make a thorough test of the finest builders' saw we ever built . . . give it a real trial on your work without obligation. Write, wire or 'phone . . .

DEWALT PRODUCTS CORPORATION 443 FOUNTAIN AVE., LANCASTER, PA., U.S.A.

Please send more information on the 1941 DeWalt Builder's Saw.

ame

Address



.. with a genuine ILG "Built-In" Kitchen Ventilating Fan-now available in complete range of sizes and prices.



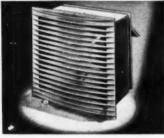
ILGVENT...350 C.F.M.

.. newest addition to ILG line modestly priced-plenty of capacity for compact kitchens in modern homes. Telescopic cabinet . . . weatherproof construction ... handsome streamlined styling ... quiet, trouble-free operation.

ILGETTE...500 C.F.M. ▶

. for medium-size kitchens. Telescopic cabinet and all other ILG features including self-cooled miracle motor that "breathes"never "gums-up" from contact with foul air. Like all ILG "Built-In" models, unit becomes permanent, integral part of kitchen wall.





◀ ILGAIR...1000 C.F.M.

. . for larger kitchens. Note new horizontal line treatment of mirror-finish aluminum grille, which, after installation, conceals fan mechanism. Either Ilgair or Ilgette may be equipped with auxiliary motor in place of pull chain for complete automatic operation by electrical wall switch.

Nationally Advertised to able-to-buy families throughout America. Write today-get details on ILG's new price schedule (F. A-1040) and 1941 program that helps you make money.



ILG ELECTRIC VENTILATING 2852 N. CRAWFORD AVENUE, CHICAGO, ILL. Offices in 43 Principal Cities



New Flame-Proof Cotton Insulation

THE Reynolds Metals Company of Richmond, Va., has begun production on a new insulation material to be called Reyn-O-Cell. It will make use of fire-resistant cotton especially treated to resist both water and fire, the fire-resistant qualities being obtained through a process that has been developed under the sponsorship of the United States Department of Agriculture. Cotton in itself is naturally water-repellant, with great resiliency, and its weight is practically negligible.

The insulation material will be supplied in blanket-form rolls of various widths and thicknesses, which can be cut to desired lengths. The material will be sold alone, or with asphalt-impregnated paper backing, or in combination with reflective metal insulation (aluminum foil). The largest use of this cotton-made insulation will be for walls, roofs, and partitions of residential

and industrial buildings of all types.

Five of the six types of Reyn-O-Cell offered to the trade are produced in mounted form, provided with flanges for fastening to the rafters, joists, or studs of buildings. This new insulation does not tend to sag or settle, because cotton is one of the lightest and toughest of fibres. The flanges on the insulation hold the cotton blankets in the center of the wall construction, thus providing space on either side for the circulation of air. This increases the efficiency of the cotton insulation in resisting heat, as well as provides for the dissipation of any condensation, and minimizes structural decay.

N.R.L.D.A. Board of Directors to Meet

THE National Retail Lumber Dealers Association, Washington, D.C., has announced that the Annual Meeting of its Board of Directors is to be held in Washington May 14 to 16 at the Shoreham Hotel. This is to be primarily a meeting of the Board of Directors, but any dealers who wish to do so are invited

New Six-Cubic Foot Refrigerator Added

A NEW six-cubic foot refrigerator has been added to the Hotpoint 1941 line, which includes several features usually found only in much higher priced units. The exterior finish is two coats of baked Calgloss enamel on Bonderized steel, and the onepiece steel cabinet interior is finished in white porcelain enamel with acid-resisting reservoir bottom. The hardware is of heavy brass chromium-plated.

Interior features include stainless steel Speed Freezer with heavy gauge aluminum door, equipped with over-center spring which allows the door to remain open until manually closed. There are four Pop-Ice trays in the Speed-Freezer, designed for easy removal of both trays and ice cubes. Also included is the Hotpoint Six-Way cold storage compartment, which allows for flexibility in storing many different types of food in the coldest part of the cabinet, as well as the gliding vegetable pan with glass top.

As a sales aid, the new 1941 Hotpoint Refrigerator Door Visualizer shows the advantages of the storage zone by spinning the dial and pointer will automatically dramatize a particular feature. This is illustrated in the view below, to the left, which shows the device mounted on the refrigerator door.

BELOW: New refrigerator sales aid is mounted on door by simply pressing it in place. New refrigerator model at right.





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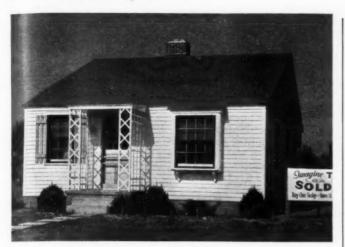
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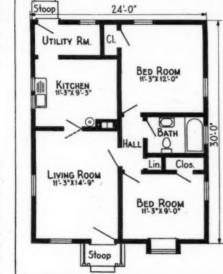
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ABOVE: A typical Sandidge - Murphy small home in its Owensboro, Ky., project is attractive and well detailed.



THE plan for this house presents four rooms, compactly arranged, within 24 by 30 feet over-all; has no waste space. TruCost figures for this house will be found on page 201.

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Owensboro, Ky., Small Homes Project Quickly Completed and Sold Out

Sandidge-Murphy's First 39 Units Find Ready Market

TO Owensboro, Ky., on the Ohio River 120 miles west of Louisville, during the past year has come unusual national recognition for having initiated one of the first large scale FHA insured operations in which prices are under \$2,000 for small homes that can be purchased for not more than \$15 a month. The Sandidge-Murphy Development Company is the firm which conceived the possibilities of this sort of enterprise under FHA insured Title I, Class 3 loans.

The company is a partnership between C. C. Sandidge and Gleeson Murphy, Jr., who had agreed that if houses could be purchased for a very low down payment, they could be sold in sufficient volume so that they could be produced in quantities. Before the formation of the partnership firm, both partners had been considerably impressed with the possibilities of mass production in the housing field and had had their attention called to the unsanitary and almost uninhabitable shot-gun houses in Owensboro, which were renting for \$10 to \$15 a month. This fact was forced on Mr. Sandidge's attention through his insurance connection with real estate, and upon the attention of Mr. Murphy through his employment of labor at the Murphy Chair Company.

Thirty-year old C. C. Sandidge is the head of C. C. Sandidge & Company, general insurance agents, and was previously connected with the Ken-Rad Corporation in the sales department.

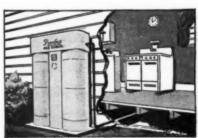
(Continued to page 174)

OUT WHERE THE GAS MAINS END . . .



that's where "PYROFAX" Gas Service begins.

"Pyrofax" Gas Service is the modern, clean, economical way to cook, heat water and make ice in homes beyond the gas mains. It's real gas—not a liquid fuel—and burns just like city gas, without soot or odor. It will make a hit with your clients because it makes cooking easier, quicker, cleaner, more economical. "Pyrofax" Gas Regulating Equipment is quickly installed without digging. Supply is guaranteed in writing by Carbide and Carbon Chemicals Corporation. Install "Pyrofax" Gas Service—and be sure of client satisfaction!



DEPENDABLE! AUTOMATIC!
Two cylinders are delivered to the home—one for use—one for reserve—to prevent the user from running out of gas. Automatic equipment, available at slight extra charge, turns on supply from reserve cylinder as soon as cylinder in use be-

PYROFAX



SUPERIOR GAS SERVICE

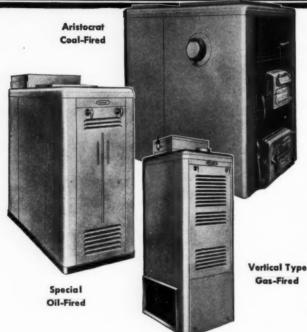
COOKING • WATER HEATING REFRIGERATION BEYOND THE GAS MAINS

====== MAIL COUPON NOW! ======



"PYROFAX" GAS DIVISION, De Carbide and Carbon Chemicals 30 E. 42nd St., New York, N. Y	Corporation,
Please send me all the facts of Sheets on installation.	n "Pyrofax" Gas and Specifications
Name	
Firm	
Street	
City	State

MONCRIEF WINTER Cit Conditioners



Quality Equipment For Low Cost Homes

YOUR Moncrief dealer can show a wide selection of quality built, attractively priced winter air conditioners and furnaces specially designed for low cost homes. They give all you can ask in compactness and style, and all produce high efficiencies with low fuel consumption. Moncrief units, adapted for burning coal, gas or oil, include features that make splendid sales points. Write for name of your Moncrief dealer.



Our Engineering Department

is maintained to cooperate with builders and architects and assist in estimating and laying out plans. Do not hesitate to avail yourself of this service. It is free.

Write for catalogs and data sheets.

THE HENRY FURNACE & FOUNDRY CO. 3479 E. 49th ST. • CLEVELAND, OHIO

Owensboro Small Homes-

(Continued from preceding page)

Gleeson Murphy, Jr., the same age, is president of the Murphy Chair Company.

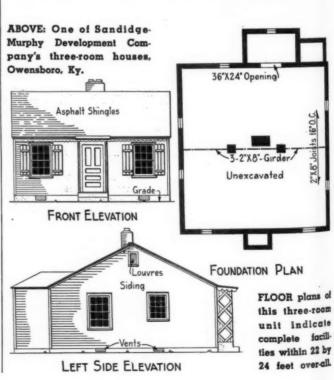
There were very few house builders in Owensboro with the exception of regular planing mills and contractors and none of them operating on a mass production basis nor selling under Title I, Class 3 financing plans.

The Sandidge-Murphy Addition, where 39 three-room houses have been completed and occupied, was bought in January 1940. The land, which was previously used as a truck garden, was immediately adjacent to the city, and it was necessary to have it taken into the city limits. Five exterior designs were included in this project. All 39 houses were under construction at one time, all material orders and contracts being placed at one time; this brought about a 20 per cent saving from the mass purchase of material and the mass production of units, and lower overhead expenses per unit.

The down payment on all houses was \$100. A \$15 deposit reserved a location for a purchaser, while the additional \$85 was payable when the loan was closed with, of course, the proceeds of the loan. No purchasers have made a down payment larger than the \$100. All houses were financed under Title I, Class 3, 15-year loans.

Cost breakdown of the three-room houses follows:





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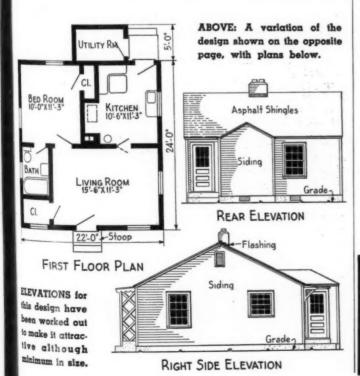
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Electric wi	rin	g																												26.00
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Painting .																														74.00
Sanding flo	or.				0												 			. 4										8.0
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Cost of lot																														100.0
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Total				0							0	0	0	0		 0		0			0		0		 				\$1	570.00

Considering their reasonable cost, these houses were well built and equipped, particularly from a structural standpoint; frames were braced, pipes, windows and joints carefully sealed, caulked and insulated against leakage and infiltration, frame shielded against termites, and other points properly flashed. Quality was maintained in equipment and fixtures throughout.

Since the original plot was developed, and completed, other units have been added to Sandidge-Murphy's fast-growing building business—over a hundred houses have been sold to date. In fact, so much interest has been created in these operations that builders from other cities have gone to Owensboro to study their methods.





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HERE LUMBER GETS ITS Plus

It takes punch to drive a wood preservative down into the fibers where protection counts. That's why the plus in Wolmanized Lumber*—protection against decay and termites—is actually pumped into it by the vacuum-pressure process.

Only by hydraulic pressure in closed steel cylinders can real penetration and diffusion of preservative be attained. That is why Wolmanizing adds a dependable plus to lumber. And the natural advantages of lumber—its cleanliness, strength, paintability, ease of handling and freedom from odor—are unchanged.

Wolmanized Lumber, the only product of its kind sold under one brand the country over, is distributed through retail lumber dealers. Write for samples of folders prepared especially for distribution to building prospects. American Lumber & Treating Co., 1645 McCormick Bldg., Chicago, Ill.

Wolmanized Lumber, used in the danger zone, gives reliable protection to the entire structure. Yet it adds less than 2% to the total cost. Banks and financing agencies approve its use.

*Registered Trade-Mark



WOLMANIZED LUMBER



ELECTRIC CONCRETE VIBRATORS

Syntron Tools carry two reputations—and are known by contractors all over the world—

First: As tools that can be depended upon to work through the job without breaking down.

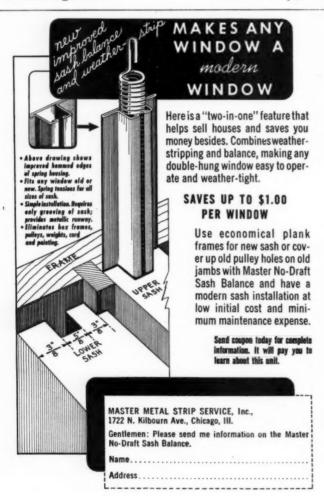
Second: As labor savers that will pay for themselves on the first fair sized job.

Write for new booklet illustrating many ways these tools speed up jobs and save money

SYNTRON COMPANY

295 Lexington Ave.

Homer City, Pa.



BOOKS on BUILDING

A Review of Current Publications

FOR information about these building books, write American Builder, Book Service Department, 30 Church Street, New York City, or the publishers,

THE CARPENTER'S AND BUILDER'S PRACTICAL RULES FOR LAY. ING OUT WORK—by D. A. Rogers. 1940. 6th. 51 pages, illus. 4¼ x 6¾, flexible. D. A. Rogers, Minneapolis, Minn. \$1.00.

The new and revised edition of this handbook consists of short but practical rules for laying out octagons, ellipses, roofs, groined ceilings, hoppers, spirals, stairs and arches, and gives tables of board measure, length of common, hip, valley, and jack rafters, square measure, cube measure, and measure of length. Also presented are rules for kerfing, drafting gable moulding, getting the axis of a segment, laying off gambrel roof, and explaining the steel square. In the tables are given 2,700 different lengths of rafters, 300 different lengths of braces and the proper cuts for them.

HEATING, VENTILATING, AIR CONDITIONING GUIDE FOR 1941—19th. 832 pages; 312 page Catalog Data Section, illus. 6 x 9, fiexible. American Society of Heating and Ventilating Engineers, 51 Madison Ave., New York City. \$5.00; thumb index edition, \$5.50.

In the new 19th edition of this Guide, recent authoritative and useful engineering data have been included, and all 46 chapters have been rearranged and grouped into seven sections to provide a more logical arrangement and to improve the correlation between the Technical and Catalog Data Sections of the book. Twenty-one chapters have been reviewed or rewritten, and many minor changes have been made in the other 25 chapters. An entirely new chapter on the Thermodynamics of Air and Water Mixtures is presented, based on the most recent information available on the subject. An important part of The Guide is the Catalog Data Section, in which much useful information has been supplied by the various manufacturers, and this section has been grouped into subdivisions for convenience in locating data. Also included are the Roll of Membership of the Society and complete indices to the Technical and Catalog Data Sections.

THE STORY OF HARBOUR GREEN—by Randolph Evans, A.I.A., and Kenneth F. Duncan, 1940. Part I—62 pages, illus. 8½ x 11, paper, spiral binding. Kenneth F. Duncan, 140 Nassau St., New York City, \$12.50.

In this book constituting Part I of a "package," there are included photographs and floor plans of twenty-four of the most popular houses built at Harbour Green, typical successful Harbour Green advertisements, two sets of specifications—one a set that conforms to FHA requirements, the other a set of the original cost-saving specifications used when desired by the purchaser where FHA insurance was not desired—a sheet of cost data, and photographs and floor plans of six additional houses designed for a suburb of Washington, D. C. Part II of the package consists of full-size working drawings of twelve of the Harbour Green Houses and of the six Washington houses.

COLORING, FINISHING AND PAINTING WOOD—by Adnah C. Newell. 1940. 480 pages, illus. 61/4 x 91/4, cloth. The Manual Aris Press, Peoria, Ill. \$4.50.

A comprehensive book on wood-finishing materials, equipment and processes which contains numerous details regarding scraping, sanding, filling, staining, lacquering, enameling, varnishing, and painting wood; also analyses of stains and colors, compositions of various resins and pigments, and the best techniques for selecting, preparing, and applying all types of finishes to wood. Because the use of quick-drying varnishes and the coloring of metals have spread widely the last few years, the author has now added six chapters to the original text, as published in 1930.

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"Luxury Items" Speed New Home Sales

(Continued from page 107)

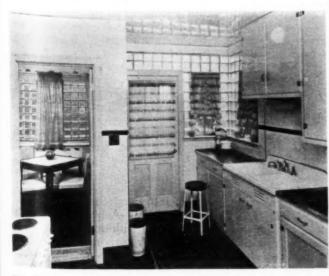
Dach. These homes will set a new standard for both quality and design.

"16. Built-in 'all gas' developments, where gas does the four big jobs—cooking, water-heating, refrigeration and home heating—making for cleaner, more healthful

Architect Trimble, in discussing the unusual amount of structural glass, mirrors and glass blocks in these homes, paid tribute to the local dealer-distributor of the Pittsburgh Plate Glass Company. Installing costs have been materially reduced, he said, by the company's sending out a man to instruct some of the builder's men in the art of practical glass setting. Also, in figuring on a quantity of glass and mirror specialties to run all through these developments—300 houses—naturally considerable economy was achieved. Trimble further expressed the belief that the buying public is now so glass-conscious that these special glass features really do give them extra quick sales on these "Luxury Homes."

Quite a radically new and different idea for bathrooms of a luxury nature has been worked out by Mr. Buckheit and his associates. It is what they call a dressingroombathroom and is being used as a sales feature in practically all of the present program of houses. One of these dressingroom-bathrooms is shown opening from bedroom No. 1 on the second floor of the \$12,000 demonstration home in Country Club Heights, illustrated at upper left page 106. The bathroom fixtures are placed on an elevated platform, one step up. Tile flooring and Carrara wainscot are used only on this upper bathroom part of the room. The other half, the dressing room, is carpeted and the walls are plastered. A double wardrobe is part of the dressing room. The result is an extra large luxury-appearing bath that appeals greatly to the ladies; and the cost is very little, if any, greater than for the conventional bathroom, because the area to be covered with tile and glass is only a part of the whole.

This is an example of unusually attractive results secured by careful planning plus sufficient volume to merit low cost. Throughout the entire series of homes such quality items are included, but not in a way to penalize the buyer. Quality that guarantees individuality and production volume to standardized costs at an attractive level is the key to quick sales of homes in each of the three current Buckheit developments.

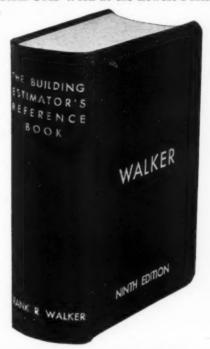


Glass blocks are used effectively in the kitchens of the South Hills
Company "Luxury Homes."

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- 1. Increase Your Profits
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- 3. Prepare More Accurate Estimates
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- 5. Perform Your Work at the Lowest Possible Cost



This New Guide contains just the information you need to prepare your estimates quickly and accurately. It gives the correct method of measuring and listing quantities from the plans, together with accurate material quantities and the labor hours necessary to complete any class of work.

Regardless of whether you do alteration, remodeling or repair work; or whether you build houses, apartments, commercial or industrial buildings—large or small—it contains just the information you require to prepare money-making estimates in the shortest possible time and with the least possible effort.

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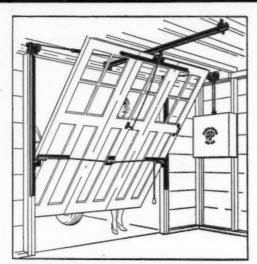
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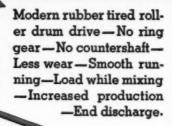
New York, N. Y.



He and his family will use the garage doors on rainy days—icy days—and cold, frosty, snowy days. If the doors give them trouble—they'll blame you.

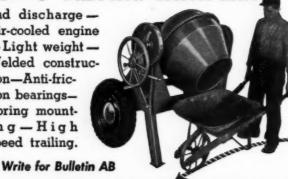
The Push-over Stock Set is the answer. It is dependable, fool-proof and trouble-proof. It will fit all openings up to 8' 11" wide by 8' high. Sets for wider opening have two top tracks, only 5\\'/2" headroom needed.





31/2-S TILTING KWIK-MIX

End discharge -Air-cooled engine -Light weight -Welded construction-Anti-friction bearings-Spring mounting - High speed trailing.



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Bargain Homes Costly to Own

(Continued from page 81)

We hear a great deal about the high cost of building materials and of high labor wage rates, but almost nothing of a much more important cause of high building costs, namely, inexperienced or inefficient management on the job. In this discussion and in the diagrams (pages 80 and 81) we are stating the case for real economy in home building, which results when good materials and equipment are used by skilled craftsmen under experienced management to create homes of lasting worth and of low monthly maintenance and operating expense.

The fact that most houses are now sold on the basis of monthly payments extending over a period of years gives a new opportunity for demonstrating the actual dollars and cents economy of quality construction. In buying a home the purchaser should consider not what the immediate outlay or the "principal sum" may be, but what will be the total monthly cost of acquiring full ownership plus the average monthly expense of occupancy.

These arguments for quality are just as valid on houses requiring little or no financing; but where amortization payments extend over a 20 to 25-year term, the costs are more readily seen. For instance, in addition to the monthly payments on the original cost of the home, the owner should include what it costs to heat and light the house and keep it in repair. Often an increase in the first cost results in substantial savings in operation.

To illustrate how, on this basis, a \$4,770 "bargain house" actually costs more per month than a quality built \$6,000 one, consider the accompanying table (see page 179). This is, of course, a hypothetical house in which the individual items are national averages and may vary widely in different communities and for different types. It does, however, definitely show that when monthly operating and maintenance costs are taken into consideration, cheap materials, equipment and services are costly. It clearly shows that A Good Home Costs Less To Own.

Let us consider some of the individual items in this table and the important part the contractor or builder plays in producing a low-upkeep job. Take ITEM 1, masonry and concrete work, for example. Sand is cheaper than cement, and cheap, dirty sand and gravel cost much less than clean, hard, well graded materials. If a "bargain job" is wanted, your "bargain contractor" might easily cut \$100 on this item, but the leaks, cracks and imperfections that would be sure to show up along about the "second winter" would cost a great deal more to repair than the 58 cents a month this \$100 adds to the amortization cost.

ITEM 2—It would be child's play for any contractor to cut \$200 on the cost of lumber and millwork by using green, ungraded lumber and cheaper millwork, improperly fitted or made from low-quality lumber. Also "wood butchers" cost a lot less than expert carpenters.

ITEM 4—Roofing—On a small home, \$60 can easily make the difference between a cheap roof and one that will give long years of satisfactory service. That \$60 amounts to less than 35 cents a month on the mortgage payments, but over a period of 25 years the cost of a cheap, leaky roof will run into hundreds of dollars.

WIRING AND FIXTURES—A house inadequately wired and insufficiently supplied with outlets not only has smaller resale value, but actually costs money, due to the excessive use of current caused by overloaded circuits.

HEATING-A quality contractor will use a soundly engineered, efficiently designed heating system with which he is familiar and which he knows from practical experience will deliver and assure low fuel bills. But a "bar-

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\$6000 QUALITY HOME COSTS 18% LESS TO LIVE IN THAN \$4770 "BARGAIN"

-	"BARGA	IN" HOUSE	QUALITY HOUSE						
	First Cost	Average Monthly Operating or Mainte- nance Cost Over 25 Yr. Period	First Cost	Average Monthly Operating or Mainte- nance Cost Over 25 Yr. Period					
1. Masonry and concrete work.	s enn nn	5 .75 & up	5 700.00	none					
2. Lumber and millwork	1,400.00	1,25 & up	1,600.00	\$.25					
3. Plaster or wallhoard	275.00	.75 & up	325.00	none					
4. Roofing.	150.00	1.00	210.00	none					
5. Sheet metal	60.00	.25	90.00	none					
6. Insulation	none	2.00 & up(1)	170.00	none					
7. Wiring and fixtures	110.00	.20 (2)	150.00	none					
8. Heating	290.00	10.00	375.00	6.00					
9. Plumbing and fixtures	315.00	.50 & up	400.00	none					
0. Painting and papering	175.00	2.00	225.00	1.00					
1. Hardware	75.00	.25	125.00	nene					
2. Kitchen equipment, including									
range and refrigerator	200.00	9.00	400.00	4.20					
3. Land and unspecified items	720.00		730.00						
14. Contractor's profit	400.00		500.00						
5. TOTAL COST	\$4,770.00		\$6,000.00						
6. Down Payment	470.00		600.00						
 Monthly Mortgage Payment (25 year—\$5.81 per \$1,000) 		\$27.61		31.37					
18. Taxes and Insurance		8.00		9.00					
19. TOTAL Monthly Cost of Owning and Operating		3.00		9.00					
Home		\$63.56		\$51.82					

(1) Increased fuel cost.

(2) Loss of electric efficiency.

THE HIGH COST of cheap construction was never better illustrated than in the table above. The "bargain" house actually costs the home owner \$11.74 a month MORE to live in. The estimates on operating and maintenance costs are conservative national averages. Due to wide variation in local building practice, individual items may not apply locally and should be refigured by a qualified local builder to fit local conditions.

gain contractor" under the pressure of a bargain-seeking buyer can easily cut \$85—or much more—on a heating plant. Although this \$85 cut would mean only 50 cents a month less on the mortgage payments, it would almost surely result in high fuel bills and maintenance expenses that could easily cost from \$2 to \$10 a month.

CHEAP PAINT (Item 10) is another item where "pennywise" bargain hunters get into trouble. The difference in high quality paint over the very cheapest, unknown brands is very slight and amounts to only a few cents a month on the mortgage payments. But if the cheap paint has to be burned off or scraped off in a year

or so, that "bargain buy" was a costly one.

ITEM 12—A large number of builders now sell their houses with kitchens fully equipped with the most modern and efficient range, refrigerator and other equipment. Does this pay out for the home owner? He probably has some old equipment that he hates to throw away. Actually, the properly equipped kitchen with an economical and efficient range and refrigerator will save far more in operating costs each month than the added payments to cover the new equipment.

When the average monthly costs of operating and maintaining various items listed in our table are totaled, it becomes immediately apparent that the cheap, "bargain house" costs much more to live in than the quality house. The buyer of the quality \$6,000 house not only has a better, more comfortable house, with higher resale value, but actually pays less per month for it.



CALK all Joints WITH PECORA COMPOUND

And Use This Gun-

With the Pecora High Pressure Calking Gun illustrated you can do a better job—in faster time—and without any messy refilling of cylinder. It takes only a few moments to load gun with a non-refillable metal cartridge containing about one quart of Pecora Calking Compound.

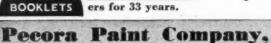
Pecora Calking Compound is also available in bulk. It is the most economical calking material you can use, for it will not dry out, crack

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or chip when properly applied. First choice of leading architects and builders for 33 years.





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ALSO MORTAR STAINS • SASH PUTTIES • ROOF COATIN PROMASTICS FOR STRUCTURAL GLASS INSTALLATION

GOOD CONSTRUCTION AT THE FOUNDATION—WITH DONLEY AREA WALLS

SAVE 50%

Get good area wall construction — good looking, long lasting, trouble free construction at low cost with Donley Area Walls. These ready-made,



ready to-install area walls take the place of expensive masonry walls. Donley Area Walls of steel are designed to offer least surface to the action of frost. Users report savings of up to 50%—you just set them in front of the window and backfill, (can be fastened to foundation if desired).

Arch formed and ribbed for strength, made of 16 ga. copper bearing steel, painted two coats (last coat special long life aluminum finish). Carefully crated for protection during shipment.

Send for 44 page catalog describing Donley Steel Area Walls and 50 other articles to improve and lower home building costs.



NEW AND USEFUL ITEMS FOR BUILDERS!



Folding All-Metal Saw Horse Legs!

Easy to transport never wear out—set up in seconds with any 2 x 4 or 2 x 6. Two heights, 24" and 30". Hundreds of uses. Thousands sold in airplane industry.

WAGNER

SAFETY ECONOMY!

New Scaffold Brackets, Roof Brackets, Ladder Brackets — speed up work and provide extra safety for carpenters, roofers, painters. Write for circulars and prices.



WAGNER MANUFACTURING COMPANY
AB-441 Cedar Falls, Iowa

Prefabricated Houses

(Continued from page 119)

The Goodwillie-Green Box Co., Rockford, Ill., has developed a substantial house business since 1934 under the sales and engineering direction of Messrs. H. L. and E. W. Green. The bulk of their houses range in price from \$2,500 to \$4,000 with an occasional larger assembly ranging from \$6,000 to \$11,000. The Goodwillie-Green house has been okayed by the Public Buildings Administration and a government order for demountable houses is in the offing. Describing the construction used, Mr. E. W. Green writes:

"First, I'll say that it is the same as conventional with the exception that wherever plaster is used we use plywood, and wherever subfloor, sheathing or roof board lumber is used we use plywood. Plywood, in all instances, is glued to framing lumber, which gives us what is known as box girder construction. It is seven times stronger than conventional construction, and the glue being used is urea resin, is waterproof and everlasting.

"Our specifications are very largely determined by public acceptance. Naturally, the plywood we purchase is graded and so is the lumber. The prefabricated house industry has spent a long time living down the extremely modernistic designs that at first were championed. I rather feel, now, that our specifications—in this geographical location—must give full basements in all houses. We must have hip or gable roofs; we must treat the exterior of all buildings with shingles, bevel siding, brick veneer, or some other conventional appearing product; the inside of our homes must be painted or papered and show absolutely no panel joints either in walls, ceilings or floors. In other words, we must learn to build in the factory the house that can be erected and completed in two or three days time and which, further, can be inspected minutely without anyone knowing that it is prefabricated."



Size 4 B 24 ft. by 36 ft.



A Gunnison home design with Mt. Vernon porch as erected in Indianapolis. Exterior reveals nothing of panel construction.

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PLAN Groups

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National Homes, Inc., Lafayette, Ind., is the creation of two old-time prefabricated house enthusiasts, Donald W. Lowman and D. C. Slipher. They have set up a real production line factory and are turning out "assembled houses." Precision jigs and power tools for the assembly line permit real efficiency. A number of standardized yet very attractive home designs are offered.

Other firms among the many that have been adapting the D.F.P. "Dri-Bilt" principle to their local needs with substantial progress of a commercial sort, are the I. N. R. Beatty Lumber Co., Joliet, Ill.; The Tolerton Lumber Co., Alliance, O.; Moore & Moore Lumber Co., Youngstown, O.; Ramsey Lumber Co., Altman, O.; Speedwall Co., Seattle; and Willis-Way Construction, Chicago. Credit should be given to the engineers of the Forest Products Laboratory, Madison, Wisconsin, for experi-

mental work and scientific tests in utilization of plywood (Continued to page 182)



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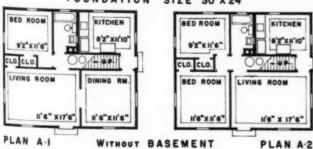
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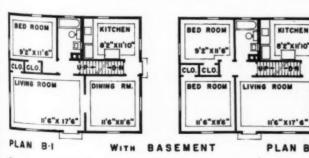
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FOUNDATION SIZE 30' X 24'

KITCHEN





Groups of Pease-Way homes erected at Ft. Wayne, Ind. Diagrams below show floor plans. Above, wall panels are delivered.



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for your copy today.

which gives complete details. Send



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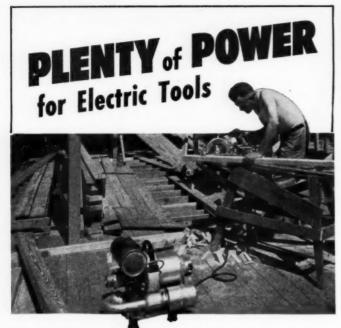
MALL TOOL COMPANY 7787 South Chicago, Avs.

Please SAW and D	A	u	R	a	Œ,	1	í r	0	e L	Í	0	1	D	0	1	0	R	1	1	M E	0	I	L	I	E	8	E	W	2	i,		D	L	A	L	E	1	R	L	L	D	IN	AIL	4	S
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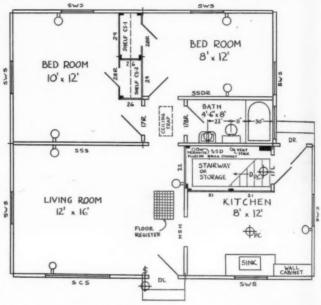
THE H. B. IVES CO.

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Prefabricated Houses

(Continued from page 181)

panels for prefabricated construction. Several demonstration houses were constructed there in the past decade and subjected to extensive field tests. The Fir Plywood Association subsequently based its work on these tests and promoted the panel type of construction in its "Dri-Bilt" handbook. Builders all over the country have gone on from that point until now shop-fabrication of large size house panels is generally accepted as practical and advantageous.



Production line in National Homes factory. ABOVE, one of the smaller National homes.

Miami Modern

(Continued from page 111)

hotels I have seen anywhere. Other towns in the Greater Miami area include Coral Gables, \$1,750,000; Hollywood, \$1,765,000; Miami Shores, \$1,627,000; and North Miami \$227,000. This area accounted for some 8,000 new private houses, most of them in the low-priced bracket and including some of the most colorful, attractive and distinctively styled moderate-priced homes being built in this land

So when the various Greater Miami chambers of commerce say that there are plenty of hotel, apartment and home accommodations they are probably telling the truth. In fact, to be more than fair, it may be said that as far as (Continued to page 184)



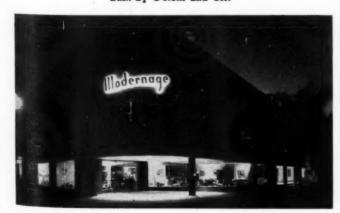
OCEAN COURT APARTMENTS, with screened porches, horizontal window overhangs.



nonpast Fir on ction ntry ation orac-

of the

BARBIZON apartment hotel, designed by John and Coulton Skinner; built by O'Neill and Orr.



THE LATEST STORE in Miami is Modernage, designed by George



DISTRIBUTORS, LTD. 35 EAST WACKER DRIVE, CHICAGO 12.2 E. 42nd STREET, NEW YORK CITY CARONDELET BUILDING, NEW ORLEANS



Learn to estimate, to plan buildings, to take contracting jobs, and make money on them. Here are 9 up-to-the-minute books on building, estimating, and contracting which cover in an interesting way, the subjects that carpenters, builders, and contractors should know to make the most out of their jobs. Roof Framing, The Steel Square, Architectural Drawing and Design, Estimating, Painting and Decorating, Heating, Air Conditioning, Building, Contracting, Concrete Forms, and other subjects are all well covered. A marvelous encyclopedia for general reference purposes in the building field.

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*COST COMPETES WITH "GRAVITY" *HOUSES planned for basement gravity furnaces can have the far greater sales appeal of Winter Air Conditioning and Summer Ventilating comfort . . . at little or no increase in cost! Simply *eliminate the basement and apply its cost on a "Pacific"

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By J. Douglas Wilson

Head of the Building Trades Department, Frank Wiggins Trade School, Los Angeles, California

and Clell M. Rogers

Mathematics Instructor, Venice High School, Venice, California



Based on a series of articles by Mr. Wilson entitled How to Estimate Accurately, which appeared in American Builder and Building Age last year, the material has been revised and expanded into this book. Many of the original illustrations have been changed and the number of helpful tables and mathematical short cuts have been increased by Mr. Rogers.

This new book clearly explains the "taking-off" of a bill of materials re-

quired for the construction of a house and the rules and methods of making an accurate estimate of costs. The constructional order of quantity survey is used. Many skilled carpenters who have taken Mr. Wilson's evening school courses in estimating have helped in making the explanations given in this book clear and practical.

210 pages, 71 illus., 36 tables, 5 x 7, cloth, \$2.50.

Book Department

AMERICAN BUILDER and BUILDING AGE 30 Church Street New York, N. Y.

Miami Modern

(Continued from page 183)

hotel building is concerned, Greater Miami has overshot the mark, and quite a few people have their fingers crossed. But who knows what will happen in this most amazing of all American cities, where orange juice flows in the streets and man-made islands are dredged from the ocean to house the most exclusive home developments? It appears fairly certain, however, that the emphasis in the next few years will be more on single-family home buildings than on hotels and apartments.

In their hotel designs the builders of Miami Beach hotels have developed to a high degree the use of a series of setbacks with corner windows to give maximum view



NEW SEA ISLE HOTEL illustrates use of numerous setbacks to get maximum window view and ventilation.



CARLS SUPERMARKET is one of the newer Miami Beach stores with good modern design. Exterior is suntan pink.



NEWLY FINISHED STORE on Alton Avenue, built by Patrick McCarl.

J. J. DeBrita, architect.

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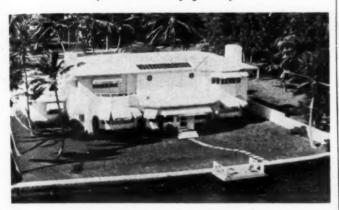
Photo I

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and ventilation. Since most of the new and bigger hotels are built close to the beach it has been important to provide as many windows with an ocean view as possible. The Sea Isle and The Shelbourne are two interesting illustrations of this type of design. The designs are functional in nature, distinguished by a large number of windows, and in many cases curved corner windows. Horizontal lines are introduced into the designs of many of the structures through projecting overhangs over the windows, which reduce the amount of direct sun in the rooms.

Exterior treatments are in brick or stucco painted a brilliant white or in tints of cream, pink and other pastel tones, with occasional spots of bright color in contrast.

(Continued to page 186)



ONE OF MIAMI'S ISLAND HOMES with private dock. Note solar water heater on roof.



BARBECUE STAND on Alton Road is done in lively, contrasting colors of cream and red.



Photo by Manley Brower

ONE OF FINER Miami homes, featuring ornamental iron now widely used. Arthur L. Jones, architect; J. Y. Gooch, builder.

KINGSTRIP

the NEW combination spring sash-balance and weatherstrip

Here is the latest equipment for double-hung windows, an efficient, smooth, silent, easily installed spring sash-balance, integral with a protective-metal frame lining that provides a perfect weatherstrip seal for both upper and lower sash.

Reduces double-hung window installation costs by 1/2

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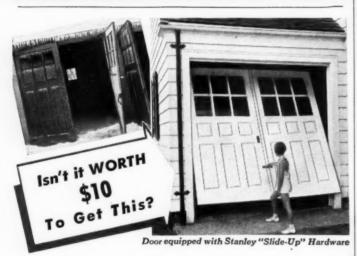
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who carries (b) Fuse Service Equipment in stock, for quick delivery. Write us for his name and address.



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All the hardware comes complete in a handy package. Easy to install, and when you're through you have garage door equipment that will speed up any sale. Try it on your next house. Your dealer can supply you, or write for folder. The Stanley Works, New Britain, Connecticut.



FOR CAREFREE DOORS

Miami Modern (Continued from page 185)

Hotel owners have not been content with the unusual architectural effects and have added super-colossal neon signs that give a Coney Island effect which, while probably effective in drawing customers, doesn't add much to the dignity of the architectural design.

In small hotels, apartments and apartment hotels, some of the best designing is being done. Here again, the use of two or three-foot flat overhangs over the windows is a common practice, and these have been rather skillfully worked into the modern architectural design. The Tudor and Kent Hotels shown well illustrate this trend.

In shops and stores some of the finest current architec-



TROUVILLE tourist court in brick and stucco, built by George Jacobs.



JEFFERSON apartment hotel, designed by Roy F. France and built by W. B. Smith & Sons. Materials by Lindsley Lumber Co.



Photos by C. E. Goodridge

KENT HOTEL has striking modern lines, typical of many of the smaller Miami Beach hotels. tura is no shop beau has shop in a

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tural work is being done. Lincoln Road in Miami Beach is not only one of the most wealthy and well patronized shopping centers in the world today, but is one of the most beautiful architecturally. This wide, palm-studded street has an unbroken row of strikingly modern and attractive shops and stores. This is a subject which will be covered in a special article in a later issue of *American Builder*.

In home architecture, both in the small speculative cottages and in the expensive island homes, Miami architects and builders are doing extremely interesting and attractive work. The white roofs and pastel colored walls, for the most part in good taste, are of especial interest. The greater number of homes are built long and low, with low pitched roofs with fairly wide projecting cornices that keep out the summer sun but permit the winter sun to shine into the house. They are frequently modern Colonial with Bermuda, Monterey, or New Orleans characteristics.

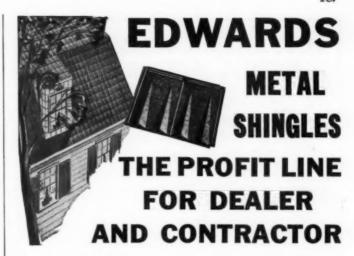
with Bermuda, Monterey, or New Orleans characteristics. The majority of Miami homes are of concrete masonry construction with reinforced concrete beams to which the roof rafters are bolted as hurricane protection. The universal practice is to treat all joists and timbers against termites or decay and also to provide metal termite shields.



STRIKING, new Shelbourne Hotel on Collins Avenue in Miami Beach, under construction.



EVEN THE Miami Beach fire house is of modern design and beautifully landscaped. It is rumored that the fire wagons are equipped with cocktail bars. Robert Law Weed, architect: G. F. Wheeler Co., builder.



Pry your roofing business out of the rut of profitless competition with Edwards Metal Shingles. Sizes and styles for every purpose. High butts; weather-tight interlocking joints and extra storm beads; wide nailing flanges; nail holes completely covered. Easy to apply on new construction or over old wood or composition roofings.

Edwards Metal Shingles prevent roof fires, defy wind storms and protect from lightning. They take little space in warehouse and turn over fast, with plenty of profit for the dealer and the contractor.

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Always advancing, Kitchen Maid Cabinets again step ahead with Composite Construction*... combining all the advantages of the best materials available. Style is original and distinctive. All units are standardized for easier planning; completely finished and ready for immediate installation. Available in two price ranges, Kitchen Maid Cabinetry offers architect and builder unlimited opportunities. Send coupon for catalog.

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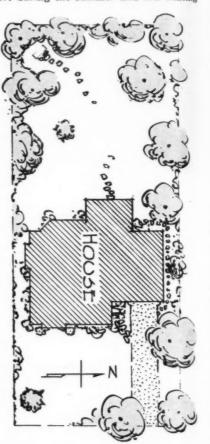
Front Cover Home-

(Continued from page 105)

The house shown here and also on the front cover was planned by Arthur P. Swanson to combine plan features which are as up-to-date as today's newspaper-living to the rear, service to the front; compactness, accessibility and circulation, plenty of storage space and general livability. Of course, it isn't perfect, but it is excellent.

Besides being well designed, this house built in Park Ridge, Ill., features specifications which will contribute to low cost of physical maintenance. The frame construction of Douglas fir set on a poured concrete foundation is stone veneered on the first floor, with a combination of Lannon and Burlington Sunset stone; white pine boards and battens above and red cedar shingles laid in a staggered pattern will give good service. The exterior walls and area above ceiling are insulated with wall thickness of rock wool. This construction with the stone on the first floor assures comfort during the summer and low heating

THE plot plan of this Park Ridge, Ill., home, as designed by Architect Arthur P. Swanson, indicates how best use was made of narrow lot with principal view to the rear with landscaped garden and wooded background. Note outdoor fireplace location.



THE living room pictured below has builtin cupboards flanking the fireplace on paneled wall.



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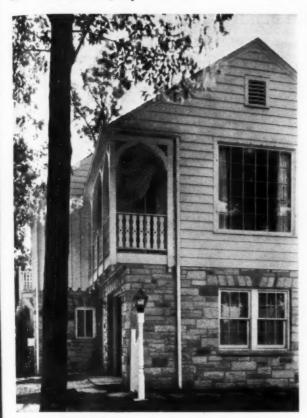
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NORTH ELEVATION of front cover home features a large fixed sash in studio bedroom, which also has private balcony.

cost in winter. The large window areas, such as full length doors in dining and living rooms and large picture window in the studio bedroom, have L-O-F glazing and are equipped with copper screens and heat saving storm sash. Interior plaster is on Rocklath except bath and kitchen, living and dining room ceilings on metal lath; metal Cornerites protect against cracking.

The floors throughout are select oak, except Nairn linoleum in kitchen and powder room, and the tile floor and wainscot in the bath. Imperial washable wallpapers and Pratt & Lambert paints and varnishes were used. Heating is with a Richmond gas-fired winter air conditioning system; Kohler plumbing fixtures. Other quality equipment items include Lightolier fixtures, Midwest kitchen ventilating fan, Stanley hardware and McKee upward-acting garage doors.

The treatment of these "motor room" doors is most important

and interesting since they are close to the front entrance. Notice how the glazed panels and blinds harmonize with the exterior design; the drive is used as an entrance walk. The finish on the fireplace wall of the living room picks up the exterior character with Vjoint vertical white pine paneling. Living room bay and living porch reach through a door in this bay; both overlook a finely wooded section of a Forest Preserve, adding further to the enjoyment and livability of this home, planned for long life economy.

A DOOR (not shown in this view at the left) leads from the third side of living room bay onto the rear living porch.

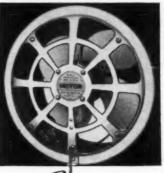


Every housewife wants what Mrs. K wanted in her home — nothing less than a Victor In-Bilt. For the In-Bilt quickly disposes of stale kitchen odors, keeps rooms free from grease and grime, and saves cleaning bills. No home is truly modern without a Victor In-Bilt. Write for catalog describing the complete line of Victor In-Bilt Ventilators. Address:

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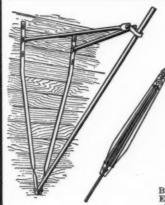
... when the realtor took her thru
the new house. But when she saw
the modern appointments, particularly the "Victor In-Bilt" Ventilator,
Mrs. K smiled approval and another
new home was marked "SOLD"



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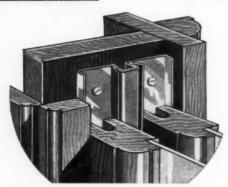
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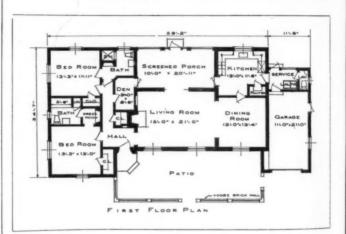
AMERICAN PLYWOOD CORPORATION New London, Wisconsin O'Dell Builds Well (Continued from page 101)

water tank into the chimney.

An unusually attractive architectural style has been developed in O'Dell's houses by the architectural firm of Petersen and Wolz, 605 Lincoln Rd., Miami Beach, The houses cannot be described according to any Old World architectural period. They are "Florida Modern," with long low lines, low pitched roofs covered with gleaming white cement tile, and walls in soft pastel tints.



SEVENTY-FOOT LONG Miami Shores home with patio.





MODERN FLORIDA DESIGN with long, low lines.

In the such style spread O'De brick color: No

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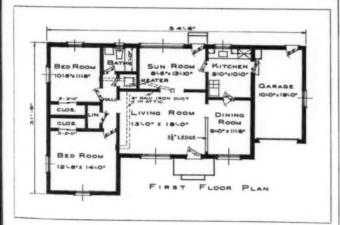
In the opinion of your American Builder correspondent, such architects as Petersen and Wolz are creating a new style of American architecture that will undoubtedly spread north. Although the exterior of many of the O'Dell houses is stucco, they also make extensive use of brick painted white, and also of brick courses in other colors to create a contrasting effect.

Noteworthy in the architectural decoration is the fashion in which the one-piece Frantz swing-up type

(Continued to page 192)



ALL-MASONRY construction, white cement roof, two baths.





HEATER IN CLOSET, sun room at rear, ample open plan.



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Seal of Approval - The Identification of a Product Meeting N. D. M. A. ve Minimum Standards



O'Dell Builds Well

(Continued from page 191)

garage doors are covered with mouldings and other decorative effects so that they are extremely attractive. Also interesting is the use of bits of ornamental iron and the decorative millwork employed in screen doors and entrance ways.

White cement tile, which has practically replaced the use of the old Spanish type red tile, is laid over a Barrett guaranteed roof built up of 30-lb. felt, mopped, and then covered with 90-lb. felt.

O'Dell's floors are unusually attractive, consisting of Bruce select oak strip flooring in all rooms except the kitchen, sun porch and bath. In the sun porch and sometimes in the dining room, O'Dell uses Armstrong asphalt tile, and he also uses Armstrong linoleum on the kitchen floor. All windows are equipped with Venetian blinds, with side tracks built into the window openings. Finish hardware throughout is Schlage's. Kitchen cabinets are factory-built Florida Maid. Moore's paints are used throughout, including Paqua special paint for plaster walls.

In his more recent houses O'Dell has been providing a small oil burning heater in a closet adjacent to the bathroom, with a short run of ducts over to the principal rooms (see plan on page 191).

Garden Oaks Homes-

(Continued from page 85)

so as to be flush with the inside wall and not project into the room, which is a decided advantage to the housewife or decorator.

5. Crushed marble roofs. The crushed marble or brick topping over built up roof costs more per square to install, but inasmuch as it is guaranteed for a period of years, it assures the purchaser of no maintenance, either for repairs or repainting. We do use some shingle roofs to change the appearance of the houses.

6. Another item of saving over a long period of time, upward acting garage door installed in all our homes. This area is subject to winds which always have caused a great deal of damage to garage doors attached by the ordinary hinge, and the cost of the upward-acting door is so little more than the cost of the other that we have adopted its use exclusively.

7. Star Liner Board with canvas and paper treatment. There is no question of the Sheetrock and Textoned walls being an advantage, but inasmuch as some purchasers object to the monotony, we have finished the last few houses in the following manner: We apply Star Liner Board direct to the studs instead of plasterboard, over which is applied a heavy canvas and then paper in the usual manner. A new tack has been perfected which applies easily and is very satisfactory for the purpose of attaching the canvas to the Star Liner Board. The various colors and patterns in the paper and the smoothness with which it may be applied if this procedure is followed make a very attractive room.

Other construction and equipment highlights of these Garden Oaks houses include No. 1 Perfection red cedar shingles for sidewalls, individual gas room heaters, Richmond plumbing, Lawson hot water heaters, plenty of convenience outlets, Venetian blinds, Lucas paints, and attic roughed in for ventilating fan.

Regarding the selection of certain other accessories, Mr. Crain points out the following: "Just as in the case of 1941 model automobiles the buyer is permitted a large range of choice in the purchase of accessories, so in these 1941 model homes the buyer may, at a slightly extra cost, obtain additional accessories over and above the basic equipment of the \$2695 house. For instance, he may want the convenient Youngstown all-steel kitchen which is featured in the demonstration home. Or he may want an attic ventilating fan, the Libbey-Owens-Ford "glass package," or some other accessory which his budget may permit.

"This demonstration home, which has been beautifully furnished by one of the local stores, contains price schedules on all items in each room, so that prospective purchasers of other homes may, if they wish, easily duplicate all or any of the equipment they may want."

Following a popular trend, the living room and dining alcove are built as one unit, and the attractive furniture here is copied from that used in one of the homes at the New York World's Fair.

The first bedroom is finished in peach and white, and is equipped with ample closet space. The roomy bath is done in white and ivory, with green tile floor and Vitrolite glass trim on the wall. The second bedroom is finished in light cream, and has an interesting three-way mirror arrangement, used in conjunction with the

closet floor, all-ste and is of the "glass cially light, small

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closet doors. The compact, efficient kitchen has an inlaid linoleum floor, and is equipped with a "trudgery-eliminating" Youngstown all-steel kitchen unit. The attached garage is completely sealed, and is equipped with a Hollywood overhead door. The beauty of the interior is enhanced by the use of the Libbey-Owens-Ford "glass package," and all rooms contain ample window space especially designed for this climate and to allow for plenty of natural light, and add further to the satisfaction of owning a well built small home that has low upkeep.

It Costs Less to Live Better

(Continued from page 83)

cost, maintenance, and depreciation. Operating equipment, however, also involves a fourth factor—monthly operating cost. It is this factor, so astonishingly often overlooked, which deserves close study.

If a house is to be lived in—and homes are built for no other reason—it must be heated, wired, lighted. The family living in it will require hot water, storage space for food and dishes, provision for refrigerating and cooking food, washing and drying dishes, disposing of garbage, and laundering clothes. These are the necessary acts of daily living and they cost money—day in and day out—the extent of the cost depending on the efficiency with which the operating equipment performs and the length of its life.

Let us take two houses, "A" and "B," for our study, assuming that the cost of the lot, structure, and similar items—with the exception of electrical and heating equipment—is identical. Let us set that cost at \$4000. Now we will add, to the first cost of each house, the retail price of the operating equipment—conventional equipment—or none at all—in one case; high-quality, modern equipment in the other case. At the same time, in adjacent columns, let us make a record of the monthly operating costs for each house. Obviously we'll have to resort to averages, approximations, and estimates—figures that may be either too high or too low for any specific house in a specific location. They'll be typical, however, and anyway it's the general picture or idea that's important.

Heating Heads the List

Heating. This is important, not only for the comfort and convenience of those living in the house, but as a major operating expense. Certainly everyone today prefers automatic heating in some form. A better-designed furnace, able to extract maximum heat from its fuel, will naturally cost more than a conventional heater. It has been demonstrated that some furnaces are as much as 50 per cent more efficient than others which may use the same type of fuel. For example, in a study of approximately a hundred homes on Long Island where high-quality furnaces had replaced less efficient ones, fuel savings ranged from 9 per cent to 64 per cent, with an average saving of 37 per cent. Notwithstanding such figures, it is often difficult for a builder or a prospective buyer to "see" this direct pocketbook relation, so let us put a conventional furnace in House A at \$350, and a highquality furnace in House B at \$495. In the monthly operating expense column, we can conservatively put down \$8 as the fuel bill for House A, and \$6 for House B, with domestic hot water included in each case.

Wiring. A large eastern utility company surveyed 13,000 of its customers as to their "pet peeves" about houses. First choice was "not enough closet space," but second in importance was "insufficient electrical outlets." The time to do good wiring is when a house is built, since it is part of the construction job. To provide for today's and tomorrow's needs, good wiring should entail plentiful outlets in the right places, convenient control of lighting, and enough current at the proper voltage to eliminate flickering lights and inefficient operation of appliances. Wiring systems may be inadequate for two reasons: (1) using wire too small in diameter, resulting in voltage-drop, which means that electrical equipment is operated at under-voltage; and (2) insufficient outlets, which means inconvenience and hazards from temporary wiring. Most qualified technicians say that a wiring system containing adequate copper can be installed almost as cheaply as an inadequate system, and additional outlets installed at

(Continued to page 194)



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It Costs Less to Live Better

(Continued from page 193)

the time of construction add little to the cost. We can assume that \$100 covers the cost of an average wiring system for House A, while \$115 will give House B a really adequate system. It has been said that adequate copper can reduce some electric bills by as much as 20 per cent, but we shall conservatively use 5 per cent. Let's assume the average bill for lighting, radios, small appliances, home laundry, etc., in House A to be \$3.00, and using the 5% saving, in House B, \$2.85—items for the monthly operating expense column.

Many Savings Possible in Kitchen

Kitchen Cabinets. In most kitchens builders supply storage facilities consisting of either factory-made steel cabinets, shopmade wood cabinets, or wood cabinets made on the job. The better cabinets are sanitary, have no-warp, no-sag doors, baked finish, toe-space, and a wide choice of such accessories as cup hooks, towel racks, vegetable bins, etc. The latter naturally costs more, so let us put the cheaper cabinets, costing \$60, in House A, and de luxe cabinets, costing \$90, in House B. Under monthly operating expenses, it is fair to say that some cabinets need periodic refinishing every three or four years, and kitchens are subject to temperature and humidity changes which cause warping and sticking, necessitating repairs or replacements. An allowance of \$24 every four years for these items would mean 50 cents a month expense for House A which would not be required for House B.

Garbage Handling and Dishwashing. These are the dirtiest and most disliked tasks in housekeeping, but although they can be eliminated by using an electric sink, many people feel that they cannot "afford" such a convenience. Therefore in House A we will put a cabinet sink, at \$60, and in House B an electric sink, with dishwasher and garbage disposall, at \$375. It is difficult to arrive at costs of doing these disagreeable jobs in the old-fashioned way, but we can make some reasonable assumptions for the monthly expense column. Let us call the monthly cost of outdoor garbage cans, indoor receptacles, sink strainers, dishrags, dishpans, and drying racks 40 cents. In many communities the cost of garbage and rubbish pick-up ranges from \$1 to \$3 per month or even higher. A disposall, doing away with food wastes, would mean fewer collections, saving say 75 cents a (If the community collects garbage, the increasing use of disposalls should be a factor in reducing taxes.) Dish breakage resulting from soapy water and excessive handling may amount to \$6 a year, or 50 cents a month. There should be a saving in towels, laundering, and cleaning supplies from using the dishwasher of something like 35 cents a month. It's probable that the beauty parlor gets 75 cents a month in business because of steamy, greasy dishwater. In a dishwasher, dishes are made hygienically clean, reducing germ transmittal, and certainly the elimination of the garbage can is like health insurance-this might be worth \$1 a month. This adds up to \$3.75 monthly expense as a charge against House A, and it doesn't include the saving of 55 minutes a day, which at 30 cents an hour (and will your wife work for that?) would be \$8.25 per month. For House B, the bacteria-killing hotter water, which the dishwasher can use because no hands need be put into it, might cost 40 cents a month more, and the electricity for the sink might bring the total operating expense up to 68 cents. Let's put that down.

Cooking. The range is one of the most essential of kitchen appliances, and there are two general types-flame and flameless. In the past seven years the number of electric ranges sold has increased 580 per cent. Ranges vary greatly in price, depending on fuel used, size, accessories, etc. The average price level of electric ranges is higher than that of flame-type equipment, 50 for House A let us put down a flame-type range at \$75, and in House B a flameless range at \$130. An electric rate, applying to cooking, of 3 cents or less per kilowatt-hour is regarded as favorable to electric ranges, and would probably determine the type of range used. Several surveys averaged about 80 KWH per month consumption for electric cookery in the typical family of four, and at a 3c rate this would be \$2.40 fuel expense. This would probably be a fair figure for the flame-type too. Flameless cooking helps reduce redecorating expense, worth perhaps 300 per month; less scouring pads and cleaning powder are required when cooking without flame, say 10c a month; more home cooking because of convenience features and cleanliness might save refice efficiency are temposion equipment would not be the control of the control

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50c per month. This makes a total of \$3.30 for House A and \$2.40 for House B, without including any evaluation of automatic features, time saving, and safety.

Refrigeration. In House A is a conventional refrigerator containing minimum equipment, at \$115, and in House B a high-quality, better-equipped product at \$135. Compared with high-quality refrigerators, it is not unusual to find that monthly operating costs of less efficient machines run 50 per cent more. If we assume the operating expense of a high-quality electric refrigerator in an average location to be \$1 a month, the less efficient machine might approximate \$1.50, and these amounts are charged up to House B and House A respectively. No attempt has been made to evaluate the additional savings that are possible today with the larger capacity and added refinements in the way of food preservation and storage found in better-equipped machines.

Water Heating. No provisions need to be made here for either house, since under "Heating" we assumed that each furnace would provide domestic hot water. But it is pertinent to point out that, contrary to what many persons believe, furnace coils do not provide free hot water. The furnace to do this job may have to be larger in size and operate for more months than it otherwise would, and many times the water never gets really hot. As much as 20 per cent of fuel consumption may go for this purpose. In the case of a heating system that does not supply hot water, a separate heater is necessary, and efficiencies for this device vary from practically 100 per cent, in the case of an electric type where heat is applied directly to the water, to as little as 35 per cent, in types which allow most of the heat to escape. Where electric rates of 1½ cents per kilowatt-hour or less are in effect for water heating, the dependability and safety of this

type of service become available at satisfactory cost. Home Laundry Equipment. More and more are architects and builders planning intelligent laundry space in homes—space that is readily convertible into use-area when not employed for laundry purposes. Laundry equipment, however, is not usually included as part of a new house, so we will not include it in either of our imaginary houses. Its cost of operation, however, would probably be covered by the electric bill we mentioned earlier. The same is true of the many small appliances which might naturally be

found in each home. Fan and Clock. The removal of cooking odors is a job for a high-quality built-in ventilating fan in the kitchen. It should be accompanied by a dependable electric wall clock. The fan might cost \$35 and the clock \$5—another \$40 for House B. Monthly operating cost for both might be about 12 cents. There is no entry here for House A since this equipment is often regarded as in the "luxury" class.

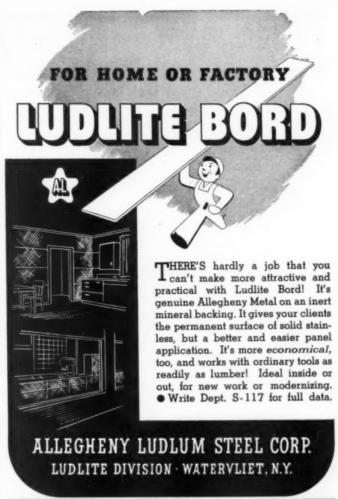
How It All Adds Up

Now, if the first cost items are added up, we find that for House A, with just conventional equipment, the total is \$4760. For House B, with the best and most complete equipment we can provide, the total is \$5380—a difference of \$620. That may not seem like much, but it applies to just the kind of equipment that both a client and a builder often seize upon when trying to reduce overall cost. Would they be justified?

The answer lies in the columns of monthly operating expenses, which are not yet complete. According to a standard source, the taxes on a \$4800 house and lot average at \$11.19 per month, and although House B has a higher cost because of the completeness and quality of its interior equipment, it is probable that this equipment would not affect the appraisal for tax purposes. Actual taxes might therefore be the same as for the first house, or \$11.19. Fire insurance, based on a national average rate of \$2.50 per thousand of house valuation per year, would work out at 83 cents a month on the \$4800 house, assuming \$800 as lot value, and at 96 cents on the \$5400 house. Using 2 per cent as a fair figure for maintenance and depreciation (excluding equipment and lot valuation) the monthly charge for this factor, for both houses, would be \$5.33. For taxes, fire insurance, maintenance, and depreciation of the structure, then, House A should be charged \$17.35 per month, and House B, \$17.48.

Interest on investment in, and depreciation and maintenance of, operating equipment, although not considered monthly out-of-pocket expenses in most households, are nevertheless factors which should be taken into consideration in computing the cost of operation. Interest on the higher cost of the second house

(Continued to page 196)





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(Continued from page 195)

would be greater than on the first house. On the other hand, it seems reasonable to assume that high-quality equipment in the second house will have a longer useful life and require less maintenance expense than the cheaper products in the first house. Estimates for these three items would perhaps total about the same for the two houses, but their computation involves technicalities and assumptions which would be more confusing than enlightening, and they are therefore omitted for the sake of

Mortgages such as those insured by FHA require a minimum down payment, on houses and lots appraised at \$6000 or less, of 10 per cent, plus enough to make the remainder in even multiples of \$100. In this case, if the mortgage appraisal coincided with our figures, the down payments would be \$560 for House A and \$580 for House B, leaving as remainders to be financed through mortgages \$4200 and \$4800 respectively. If these balances can be paid for from the proceeds of an FHA-type long-term single mortgage, the monthly payments on a 25-year basis (\$5.81 per month per \$1000) would be \$24.40 for House A, and \$27.89 for House B. In other words, all of the advantages of the complete high-quality electrical equipment would cost the buyer an additional \$3.49 per month-or less than the cost of a package of cigarettes a day!

Amortization payments, however, are like rent and should be included in a family's monthly budget. Therefore we will transfer the two amounts to the monthly outlay columns-and add them up.

For conventional House A, monthly outlay for heating, wiring, cabinets, sink, cooking, refrigeration, taxes, maintenance, depreciation, and amortization totals \$61.80.

For completely electrified House B, the total for the same items. plus dishwasher, garbage disposal, fan, and clock, is \$58.42. It

actually costs less to live better.

As I said before, I make no claim for the intrinsic accuracy of the figures used here. I do maintain, however, that the results are typical of what's happening every day. If we'll recognize that "operating equipment" is one of the essential differences between a house and a barn; if we'll recognize that a house today consists of three elements, not two-land, structure, and operating equipment; if we'll recognize that cost to pay for a house and cost to live in it come out of the same pocketbook, then maybe we'll also recognize that only the rich can afford inefficient and poor operating equipment, and that high-quality equipment can right now contribute as much to lowering the cost of home ownership as a sizeable reduction in structural costs would effect—not to mention convenience, release from drudgery, saving of time, and the higher standard of living that comes with this type of equipment

Modern Stores-

(Continued from page 113)

suitable for covering with linoleum, carpet, rubber tile, or left as they are.

11. Electrical wiring should, if possible, be completed only after the needs of the tenant are known. Many modern stores require the use of luminaries, recessed fixtures, lighting troughs, wall, column or cornice cove lights. In addition, floor and wall outlets for display cases, fan outlets vacuum cleaner outlets, counter lighting outlets and convenience outlets in varying locations may also be custom-located for the tenant. To enable him to obtain maximum flexibility with the electric system, a panel in the rear or basement may be provided with rough connections in the furred roof space. He may then bring his wiring through the floor or down through the ceiling.

12. The exterior of the store should be stripped of all ornament. Cornices, breaks, flutings, panels, and contrasting materials only make the installation of a tenant's signs, front and interior design more difficult. The exterior can be made attractive, however, by giving it good simple form and proportion. The height of the parapet above show windows should permit the application of a large sign. Eight to ten feet high above the window or transom

is not too high for a Main Street store parapet.

13. Vertical supports between store windows-especially those of masonry-should be avoided, as they complicate the combining of two or more individual store units into one large store. They also become stained and are often misused by tenants. metal mouldings make the best vertical separators.

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"British Thoroughness"

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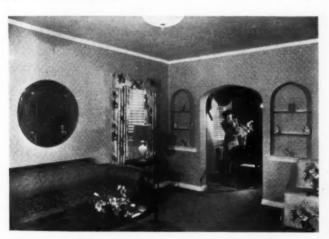
York City and brought many of the advantages of suburban environment right into the geographical center of the metropolis.

The typical Green Park home is a brick veneer structure, using Celotex sheathing on the side walls and U. S. G. Rocklath interiors with two coats of plaster. Second-floor ceilings are constructed with insulating Rocklath. The steam heating system features a Columbia steel boiler with oil burner, and the average heating bill for an \$8,500 home runs about \$10 per month or less.

An important feature of the quality construction that has been employed in recent years has been the use of Hope's Bonderized Holford windows equipped with redwood surrounds. The windows are extra large and have played an important part in the attractiveness of the homes, as well as contributing to low upkeep.

Foundations are of 12-inch concrete specially waterproofed and accompanied by a 5-year guarantee against leakage. Seasoned grade- and trade-marked lumber is used, as well as No. 1 Bangor slate roofs, durable oak floors and full tile baths.

Turner and Noone have adopted American ideas in building for the American public. They found that in order to sell homes in this country they had to equip them with the latest in comfort and convenience equipment. Most middle-priced houses in England do not have central heating, but instead use a number of fireplaces. If the fireplaces are used extensively to keep the house really warm, the cost of the coal would be greater than the fuel used by the efficient central system employed in Green Park Estates. However, Englishmen apparently like their houses a lot cooler than Americans.



COLORFUL Green Park living room, looking towards dining room.



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HOBOKEN



Two California Homes-

(Continued from page-117)

Douglas fir trim includes the 13/4-in. entrance door. Cedar shingles are used on the overhanging ridged roof, and the leaded pane casement windows have redwood beveled sills. Floors are red oak throughout, except tile in the bath. Kitchen alcove has a built-in upholstered seat.

A Pacific forced air furnace heats and ventilates the entire house, and also serves as an air cooling unit with connections for each room of the house. "Standard"

plumbing fixtures are used.

The second house shown is of a similar type, built in Hidden Village section, North Hollywood, Calif., by J. Byron Severance; it was furnished as a model home by Barker Bros., Hollywood branch. The exterior of this two-bath English type house is also of stucco and redwood half-timber trim, stained dark, with red brick veneer giving it an authentic English touch. The brick





ABOVE: Upper view, large floral design wallpaper was selected for the Thatcher model; note built-in window box in sill. Lower view, twin closets are separated by well lighted dressing table space in the Severance demonstration home. North Hollywood, Calif.

construction forms part of the exterior living room wall and entrance. Characteristic of this type of architecture are the steel casement windows with leaded panes of "B" glass and redwood all-around. The entrance door is of sugar pine with ovlo, the interior woodwork is of white pine, and the floors are 1/2 x 11/2 clear oak.

White pine planks were used above the corner fireplace and also for wall alcoves, as well as for the timbered ceiling with its dark-stained beams; ceilings in other rooms, however, are plaster. The fireplace, distinguished by a marble hearth and face and a Curtis mantel, gives the room a semi-formal tone.

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"TruCost" Estimating Figures for Home Designs in This Issue



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The Editors have prepared a 28-page explanation of American Builder's "TruCont" system of quick, accurate estimating and offer it to anyone interested at 25 cents per copy. Please enclose payment when ordering. Address American Builder, 30 Church Street, New York City.

Page 84, April; Garden Oaks Co., Bldr.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Trench Walls, 154 lin. ft.; Garage Floor, 175 sq. ft.; Outside Walls, 16.00 sqs.; First Floor, 7.54 sqs.; Ceiling, 9.25 sqs.; Roof Pitch, 6" rise per ft. run; Roof, 13.00 sqs.; Cornice, C & F, 142 lin. ft.; Cornice, 16", 78 lin. ft.; Partitions, 114 lin. ft.; Inside Finish OS Walls, 110 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 1 opg.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opgs., 10 opgs.; Windows and Casements, 9 opgs.; Gable Sash and Louvers, 2 opgs.

Page 100, April; O'Dell, Bldr.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Trench Walls, 200 lin. ft.; Garage Floor, 180 sq. ft.; Outside Walls, 17.00 sqs.; First Floor, 11.00 sqs.; Ceiling, 12.80 sqs.; Roof Pitch, 4" rise per ft. run; Roof, incl. Porch, 15.00 sqs.; Hips and Valleys, 60 lin. ft.; Cornice, C & F, incl. Porch, 200 lin. ft.; Cornice, 6", 200 lin. ft.; Partitions, 126 lin. ft.; Inside Finish OS Walls, 140 lin. ft.; Front and OS French Doors, 3 opgs.; Rear and Grade Doors, 2 opgs.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opgs., 10 opgs.; Windows and Casements, 9 opgs.; Porch Floor, 1.40 sqs.; Porch Ceilings, 1.20 sqs.; Porch Beam, 28 lin. ft.; Porch and Balcony Post and Newels, 4; Porch and Deck Rail, 10 lin. ft.

Page 190, upper, April; O'Dell, Bldr.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Trench Walls, 260 lin. ft.; Garage Floor, 232 sq. ft.; Outside Walls, 23.00 sqs.; First Floor, 17.00 sqs.; Ceiling, 19.32 sqs.; Roof Pitch, 5" rise per ft. run; Roof, incl. Porch, 20.00 sqs.; Hips and Valleys, 100 lin. ft.; Cornice, C & F, incl. Porch, 225 lin. ft.; Cornice, 12", 225 lin. ft.; Partitions, 200 lin. ft.; Inside Finish OS Walls, 230 lin. ft.; Front and OS French Doors, 2 opgs.; Rear and Grade Doors, 2 opgs.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opgs., 19 opgs.; Windows and Casements, 13 opgs.; Chimney, 16 lin. ft.; Porch Floor, 2.30 sqs.; Porch Ceilings, 2.30 sqs.; Porch Beam, 30 lin. ft.; Porch and Balcony Post and Newels, 4; Porch and Deck Rail, 16 lin. ft.

Page 191, lower, April; O'Dell, Bldr.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Trench Walls, 220 lin. ft.; Garage Floor, 190 sq. ft.; Outside Walls, 18.00 sqs.; First Floor, 12.00 sqs.; Ceiling, 13.90 sqs.; Roof Pitch, 5" rise per ft. run; Roof, 16.00 sqs.; Hips and Valleys, 80 lin. ft.; Cornice, C & F, 180 lin. ft.; Cornice, 4", 160 lin. ft.; Partitions, 152 lin. ft.; Inside Finish OS Walls, 152 lin. ft.; Front and OS French Doors, 2 opgs.; Rear and Grade Doors, 1 opg.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opgs., 13 opgs.; Windows and Casements, 10 opgs.; Floor, .36 sqs.

Page 102, April; Blietz, Bldr.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 128 lin. ft.; Trench Walls, 50 lin. ft.; Basement Floor, 800 sq. ft.; Garage Floor, 210 sq. ft.; Excavation per ft. deep, 40 cu. yds.; Outside Walls, 28.00 sqs.; First Floor, 8.75 sqs.; Second Floor, with fin. flg., 10.00 sqs.; Ceiling, 21.00 sqs.; Roof Pitch, 7" and 8½" rise per ft. run; Roof, 16.00 sqs.; Hips and Valleys, 32 lin. ft.; Cornice, C & F, 200 lin. ft.; Cornice, 6", 200 lin. ft.; Partitions, 270 lin. ft.; Inside Finish OS Walls, 300 lin. ft.; Front and OS French Doors, 2 opgs.; Rear

(Continued to page 200)

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TruCost Figures-

(Continued from page 199)

and Grade Doors, 1 opg.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opgs., 25 opgs.; Windows and Casements, 30 opgs.; Chimney, 36 lin. ft.; Main Stairs, 1; Porch Floor, .30 sqs.

Page 103, April; Blietz, Bldr.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 160 lin. ft.; Trench Walls, 120 lin. ft.; Basement Floor, 1050 sq. ft.; Garage Floor, 385 sq. ft.; Excavation per ft. deep, 50 cu. yds.; Outside Walls, 35.00 sqs.; First Floor, 10.50 sqs.; Second Floor, with fin. flg., 10.50 sqs.; Ceiling, 25.00 sqs.; Roof Pitch, 12" rise per ft. run; Roof, 21.00 sqs.; Hips and Valleys, 40 lin. ft.; Cornice, C & F, 350 lin. ft.; Cornice, 8", 200 lin. ft.; Partitions, 280 lin. ft.; Inside Finish OS Walls, 300 lin. ft.; Front and OS French Doors, 3 opgs.; Rear and Grade Doors, 3 opgs.; Garage Door 14 ft. wide, 1; Inside Doors and Cased Opgs., 25 opgs.; Windows and Casements, 24 opgs.; Gable Sash and Louvers, 3 opgs.; Chimney, 36 lin. ft.; Main Stairs, 1; Porch Floor, 2.00 sqs.; Porch Ceilings, 1.68 sqs.; Porch Beam, 42 lin. ft.; Porch and Balcony Post and Newels, 5; Porch Roof, 2.60 sqs.; Porch Cornice, 60 lin. ft.; Porch Rail and Picket Fence, 42 lin. ft.

Page 105, April; Swanson, Archt.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 120 lin. ft.; Trench Walls, 74 lin. ft.; Basement Floor, 825 sq. ft.; Garage Floor, 195 sq. ft.; Excavation per ft. deep, 44 cu. yds.; Outside Walls, 25.00 sqs.; First Floor, 8.25 sqs.; Second Floor, with fin. flg., 10.00 sqs.; Ceiling, 20.20 sqs.; Roof Pitch, 7" rise per ft. run; Roof, 13.50 sqs.; Hips and Valleys, 24 lin. ft.; Cornice, C & F, 180 lin. ft.; Partitions, 175 lin. ft.; Inside Finish OS Walls, 264 lin. ft.; Front and OS French Doors, 4 opgs.; Rear and Grade Doors, 1 opg.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opgs., 18 opgs.; Windows and Casements, 28 opgs.; Gable Sash and Louvers, 3 opgs.; Chimney, 34 lin. ft.; Main Stairs, 1; Porch Floor, 1.46 sqs.; Porch Ceilings, 2.12 sqs.; Porch Beam, 56 lin. ft.; Porch and Balcony Post and Newels, 24; Front Balcony Floors and Rear Porch Roof, 2.50 sqs.; Porch Cornice, 50 lin. ft.; Porch and Deck Rail, 64 lin. ft.

Page 114, April; Zamore, Bldr.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 100 lin. ft.; Trench Walls, 50 lin. ft.; Basement Floor, 484 sq. ft.; Garage Floor, 190 sq. ft.; Excavation per ft. deep, 22 cu. yds.; Outside Walls, 20.00 sqs.; First Floor, 4.84 sqs.; Second Floor, with fin. flg., 4.84 sqs.; Ceiling, 11.68 sqs.; Roof Pitch, 7" rise per ft. run; Roof, 10.75 sqs.; Hips and Valleys, 10 lin. ft.; Cornice, C & F, 175 lin. ft.; Partitions, 150 lin. ft.; Inside Finish OS Walls, 190 lin. ft.; Front and OS French Doors, 2 opgs.; Rear and Grade Doors, 1 opg.; Garage Door 8 ft. wide, 1; Inside Doors and Cased Opgs., 12 opgs.; Windows and Casements, 20 opgs.; Gable Sash and Louvers, 2 opgs.; Chimney, 34 lin. ft.; Main Stairs, 1; Porch Floor, .36 sqs.



Page 115, April; Dofsen, Archt.

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"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Basement Walls, 154 lin. ft.; Basement Floor, 1000 sq. ft.; Excavation per ft. deep, 41 cu. yds.; Outside Walls, 14.00 sqs.; First Floor, 10.00 sqs.; Ceiling, 10.00 sqs.; Roof Pitch, 5" rise per ft. run; Roof, 12.00 sqs.; Hips and Valleys, 80 lin. ft.; Cornice, C & F, 160 lin. ft.; Partitions, 150 lin. ft.; Inside Finish OS Walls, 154 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 1 opg.; Inside Doors and Cased Opgs., 14 opgs.; Windows and Casements, 24 opgs.; Gable Sash and Louvers, 1 opg.; Chimney, 22 lin. ft.; Porch Floor, .14 sqs.; Porch Ceilings, .08 sqs.; Porch Beam, 4 lin. ft.

Page 117, April; Thatcher, Bldr.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Trench Walls, 260 lin. ft.; Service Rm. Floor, 84 sq. ft.; Garage Floor, 324 sq. ft.; Outside Walls, 32.00 sqs.; First Floor, 17.00 sqs.; Ceiling, 20.50 sqs.; Roof Pitch, 7" rise per ft. run; Roof, 27.00 sqs.; Hips and Valleys, 100 lin. ft.; Cornice. C & F, 100 lin. ft.; Cornice, 12", 275 lin. ft.; Partitions, 236 lin. ft.; Inside Finish OS Walls, 260 lin. ft.; Front and OS French Doors, 3 opgs.; Rear and Grade Doors, 3 opgs.; Garage Door, 15 ft. wide, 1; Inside Doors and Cased Opgs., 28 opgs.; Windows and Casements, 27 opgs.; Gable Sash and Louvers, 2 opgs.; Chimney, 24 lin. ft.; Porch Floor, 1.75 sqs.; Porch Ceilings, 1.25 sqs.; Porch Beam, 15 lin. ft.; Porch and Balcony Post and Newels, 4; Porch Roof, 1.50 sqs.; Porch Cornice, 15 lin. ft.

Page 117, April; Severance, Bldr.

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Trench Walls, 240 lin. ft.; Laundry Floor, 60 sq. ft.; Garage Floor, 325 sq. ft.; Outside Walls, 30.00 sqs.; First Floor, 17.00 sqs.; Ceiling, 20.25 sqs.; Roof Pitch, 9" rise per ft. run; Roof, incl. Porch, 28.00 sqs.; Hips and Valleys, 100 lin. ft.; Cornice, C & F, incl. Porch, 300 lin. ft.; Partitions, 260 lin. ft.; Inside Finish OS Walls, 240 lin. ft.; Front and OS French Doors, 3 opgs.; Rear and Grade Doors, 1 opg.; Garage Door 16 ft. wide, 1; Inside Doors and Cased Opgs., 28 opgs.; Windows and Casements, 15 opgs.; Gable Sash and Louvers, 3 opgs.; Chimney, 24 lin. ft.; Porch Floor, 3.25 sqs.; Porch Ceilings, .16 sqs.; Porch Beam, 8 lin. ft.; Porch and Balcony Post and Newels, 3.

Page 173, April; Sandidge-Murphy, Bldrs.; 4-Room

"TRUCOST" ESTIMATING FIGURES FOR THIS HOUSE: Foundation Walls, 108 lin. ft.; Trench Walls, 20 lin. ft.; Utility Rm. Floor, 36 sq. ft.; Excavation per ft. deep, 31 cu. yds.; Outside Walls, 13.00 sqs.; First Floor, 6.84 sqs.; Ceiling, 7.20 sqs.; Roof Pitch, 8" rise per ft. run; Roof, 8.75 sqs.; Cornice, C & F, 124 lin. ft.; Partitions, 98 lin. ft.; Inside Finish OS Walls, 110 lin. ft.; Front and OS French Doors, 1 opg.; Rear and Grade Doors, 1 opg.; Inside Doors and Cased Opgs., 10 opgs.; Windows and Casements, 10 opgs.; Gable Sash and Louvers, 2 opgs.; Chimney, 28 lin. ft.; Porch Floor, .25 sqs.; Porch Ceilings, .15 sqs.; Porch Beam, 12 lin. ft.; Porch and Balcony Post and Newels, 4; Porch Roof, .15 sqs.; Porch Cornice, 12 lin. ft.



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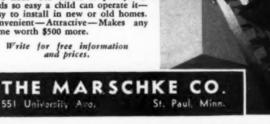
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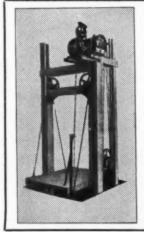
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CLASSIFIED DIRECTORY AND BUYERS' GUIDE

Listing the Manufacturers of Materials and Equipment Used in Building

IN this Directory are listed building materials, prodducts and equipment, contractors' and builders' tools, and special building services. ranged from A to Z according to NOUN names. For example, to find any kind of cabinet, look under "CABINETS," where you will find CABINETS—Bathroom, —Dressing Room, —Kitchen, and —Storage. Under each classification the names and addresses of manufacturers appear alphabetically.

The manufacturers listed below will be pleased to furnish complete information on any product that appears in connection with their names, although they may not be advertising those particular products in this April number. Do not hesitate to write them to forward catalogues, prices and the names and locations of their nearest dealers.

To find the manufacturer of a branded article known to you only by its trade name, look in the TRADE NAME Index immediately following this Directory where you will find nearly every trade name or brand listed alphabetically and the name and address of the

manufacturer following it.

ABRASIVES
American Floor Surfacing Machine Co.,
Toledo, Ohio
Mall Tool Co., Chicago
Walker-Turner Co., Plainfield, N.J.
Wooster Products, Inc., Wooster, Ohio
ACCELERATORS—CEMENT
American Fluresit Co., Cincinnati, Ohio
Calbar Paint & Varnish Co., Philadelphia, Pa.
Certain-teed Products Corp., New York
Solvay Sales Corp., New York
L. Sonneborn Sons, Inc., New York
Woodville Lime Products Co., Toledo, Ohio
ACCORDION DOOR HANGERS—
See Hardware, Accordion Door
ACOUSTICAL INSULATION—
See Boards, Sound Deadening;
Cement, Acoustical;
Felts, Sound Deadening;
Plaster, Sound Deadening;
Plaster, Sound Absorbing; and
Tile, Acoustical
ADHESIVES—
See Cements
ADUISTERS—CASEMENT WINDOW—

See Cements
ADJUSTERS—CASEMENT WINDOW—
See Hardware, Casement Window
AIR COMPRESSORS—

AIR COMPRESSORS—
See Compressors, Air
AIR CONDITIONING EQUIPMENT
Airtemp Division, Dayton, Ohio
American Radiator & Standard Sanitary Corp.,
Pittsburgh, Pa.
Calesco Corp., Lynn, Mass.
Crane Co., Chicago
General Electric Co., Air Cond. & Comm.
Refrig. Dept., Bloomfield, N.J.
Henry Furnace & Foundry Co., Cleveland,
Ohio

Refrig. Dept., Bloomfield, N.J.
Henry Furnace & Foundry Co., Cleveland,
Ohio
Ilg Electric Ventilating Co., Chicago
Iron Fireman Mfg. Co., Portland, Ore.
Majestic Co., Huntington, Ind.
Modine Mfg. Co., Racine, Wis.
L. J. Mueller Furnace Co., Milwaukee, Wis.
Norge Heating & Conditioning Division, Detroit, Mich.
Pacific Gas Radiator Co., Huntington Park,
Calif.
Payne Furnace & Supply Co., Beverly Hills,
Calif.
Round Oak Co., Dowagiac, Mich.

Pacific Gas Radiator Co., Huntington Park, Calif.
Payne Furnace & Supply Co., Beverly Hills, Calif.
Round Oak Co., Dowagiac, Mich.
Rybolt Heater Co., Ashland, Ohio
Surface Combustion Corp., Toledo, Ohio
AIR DRYERS—
See Dryers, Air
AIR GRATES—
See Grates, Air
ALUMINUM PAINT—
See Paint, Aluminum
ANCHORS—BUILDING
American Brass Co., New York
Cincinnati Iron Fence Co., Cincinnati, Ohio
Donley Brothers Co., Cleveland, Ohio
Wagner Mfg. Co., Cedar Falls, Iowa
ANCHORS—DOOR BUCK
Donley Brothers Co., Cleveland, Ohio
ANCHORS—JOIST
Cincinnati Iron Fence Co., Cincinnati, Ohio
Donley Brothers Co., Cleveland, Ohio
Gabriel Steel Co., Detroit, Mich.
Wagner Mfg. Co., Cedar Falls, Iowa
ANCHORS—SCREW (Expansive)
National Lead Co., New York
ANCHORS—WALL
Cincinnati Iron Fence Co., Cincinnati, Ohio
Donley Brothers Co., Cleveland, Ohio
ANCHOR BOLTS—
See Bolts, Anchor
ANGLE IRONS—
See Irons, Angle
ANTI-FREEZE COMPOUNDS—
See Compounds, Anti-Freeze
ARBORS—SAW
Consolidated Machinery & Supply Co., Los
Angeles, Calif.
DeWalt Products Corp., Lancaster, Pa.
Walker-Turner Co., Plainfield, N.J.
ARCHES—CORRUGATED IRON
American Rolling Mill Co., Middletown, Ohio
Carnegie-Illinois Steel Corp., Pittsburgh, Pa.
Edwards Mfg. Co., Cincinnati, Ohio
ARCHITECTURAL IRON—
See Grates, Area
AREA WALLS—
See Walls, Area

ASBESTOS CEMENT—
See Cement, Asbestos
ASBESTOS DOORS—
See Doors, Asbestos
ASBESTOS LUMBER—
See Lumber, Asbestos
ASBESTOS PAPER—
See Paper, Asbestos See Paper, Asbestos ASBESTOS SHINGLES— ASBESTOS SHINGLES—
See Roofing, Asbestos Shingles
ASBESTOS SHINGLE CUTTERS—
See Cutters, Asbestos Shingle
ASBESTOS SIDING—
See Siding, Asbestos
ASHPIT DOORS—
See Doors, Ashpit
ASPHALT CEMENT—
See Cement, Asphalt See Doors, Ashpit
ASPHALT CEMENT—
See Cement, Asphalt
ASPHALT FELTS—
See Felts, Asphalt
ASPHALT SHINGLES—
See Roofing, Asphalt Shingles
ATTIC FANS—
See Roofing, Asphalt Shingles
ATTIC FANS—
AUTOMATIC WATER HEATERS—
See Heaters, Water (Automatic)
AUTOMOBILES
Chevrolet Motor Division, Detroit, Mich.
Ford Motor Co., Dearborn, Mich.
AWNINGS—CORRUGATED STEEL
Edwards Mfg. Co., Cincinnati, Ohio
Milcor Steel Co., Milwaukee, Wis.
BALANCES—SASH
Acme Spring Sash Balance Co., Los Angeles,
Calif.

Acme Spring Sash Balance Co., Los Angeles, Calif.
Caldwell Mfg. Co., Rochester, N.Y.
Carr, Adams & Collier Co., Dubuque, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Grand Rapids Hardware Co., Grand Rapids.

Grand Rapids Hardware Co., Grand Rapids,
Mich.
Master Metal Strip Service, Inc., Chicago
Pullman Mfg. Corp., Rochester, N.Y.
BANDSAWS—
See Saws, Band
BARN DOOR HANGERS—
See Hardware, Barn Door
BARN DOOR RAILS—
See Rails, Barn Door
BARN DOOR ROLLERS—
See Rollers, Door
BARN EQUIPMENT—
See Equipment, Barn
BARN VENTILATORS—
See Ventilators, Roof
Behlehem Steel Co., Bethlehem, Pa.
Tennessee Coal, Iron & R. R. Co., Birmingham,
Ala.

Bethlehem Steel Co., Bethlehem, Fa.
Tennessee Coal, Iron & R. R. Co., Birmingham,
Ala.

BARS—WRECKING
Stanley Tools, New Britain, Conn.
BASE BEAD—See Bead, Base
BASE—COVE (Metal)
American Brass Co., New York
B & T Floor Co., Columbus, Ohio
Knapp Bros. Mfg. Co., Joliet, Ill.
Milcor Steel Co., Milwaukee, Wis.
U. S. Gypsum Co., Chicago
Wilson Metal Products Co., Columbus, Ohio
BASE—COVE (Rubber)
Armstrong Cork Co., Lancaster, Pa.
Wright Rubber Products Co., Racine, Wis.
Wilson Metal Products Co., Columbus, Ohio
BASE—COVE (Wood)
Bradley Lbz. Co. of Arkansas, Warren, Ark.
Curtis Companies, Inc., Clinton, Iowa
Exchange Sawmills Sales Co., Kansas City,
Mo.

Exchange Sawmills Sales Co., Kansas City, Mo.
Farley & Loetscher Mfg. Co., Dubuque, Iowa Frost Lumber Industries, Inc., Shreveport, La. Shevlin Pine Sales Co., Minneapolis, Minn.
BASE—INSULATING
Celotex Corp., Chicago
Homasote Co., Trenton, N.J.
Insulite Co., Minneapolis, Minn.
Johns-Manville, New York
BASE—PLASTER
Armstrong Cork Co., Lancaster, Pa.
Carr, Adams & Collier Co., Dubuque, Iowa Celotex Corp., Chicago
Certain-teed Products Corp., New York
Fir-Tex Insulating Board Co.. Portland, Ore.
Flintkote Co., New York
Homasote Co., Trenton, N.J.
Insulite Co., Minneapolis, Minn.
Johns-Manville, New York

Masonite Corp., Chicago
Milcor Steel Co., Milwaukee, Wis.
National Gypsum Co., Buffalo, N.Y.
U.S. Gypsum Co., Chicago
Woodville Lime Products Co., Toledo, Ohio
BASE—STUCCO
American Steel & Wire Co., Cleveland, Ohio
Johns-Manville, New York
U.S. Gypsum Co., Chicago
BASE MOULDING—
See Moulding, Base

See Moulding, Base BASE SCREEDS—

BASE SCREEDS—
See Screeds, Base
BASES—COLUMN
Curtis Companies, Inc., Clinton, Iowa
Donley Brothers Co., Cleveland, Ohio
Majestic Co., Huntington, Ind.
Pacific Mutual Door Co., Tacoma, Wash.
BASES—PORCH
California Redwood Distributors, Ltd., Chicago

Majestic Co., Huntington, Ind.
Pacific Mutual Door Co., Tacoma, Wash.
BASES—PORCH
California Redwood Distributors, Ltd., Chicago
Farley & Loetscher Mfg. Co., Dubuque, Iowa Majestic Co., Huntington, Ind.
BASEMENT WINDOWS—
See Frames, Basement Window BASEMENT WINDOW—
See Walls, Area BATHS—BUILT-IN
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
Crane Co., Chicago Kohler, Wis.
Libbey-Owens-Ford Glass Co., Toledo, Ohio BATHS—FOOT
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
Crane Co., Chicago Kohler, Wis.
BATHS—SHOWER
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
Crane Co., Chicago
Eljer Co., Kohler, Wis.
BATHS—SHOWER
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
Crane Co., Chicago
Eljer Co., Ford City, Pa.
Kohler Co., Kohler, Wis.
Henry Weis Mfg. Co., Elkhart, Ind.
BATHS—SITZ
American Radiator & Standard Sanitary Corp.
Pittsburgh, Pa.
Crane Co., Chicago
Kohler Co., Kohler, Wis.
BATH TUBS—
See Hangers, Bath Tub
BATHSOM BRACKETS—
See Hangers, Bath Tub
BATHROOM BRACKETS—
See Brackets, Bathroom
BATHROOM CABINETS—
See Fixtures, Bathroom
BATHROOM HEATERS—
See Fixtures, Bathroom
BATHROOM HEATERS—
See Fixtures, Bathroom
BATHROOM HEATERS—
See Blankets, Insulating; or Wool, Mineral
BATTENS—METAL
Edwards Mfg. Co., Cincinnati, Ohio
Miloor Steel Co., Milwaukee, Wis.
Upson Co., Lockport, N.Y.
BATEENS—WOOD
Bradley Lbr. Co. of Arkansas, Warren, Ark.
California Redwood Distributors, Ltd., Chicago
Curtis Companies, Inc., Clinton, Iowa
Exchange Sawmills Sales Co., Kansas City,

Curtis Companies, Inc., Clinton, Iowa Exchange Sawmills Sales Co., Kansas City,

Exchange Sawmills Sales Co., Kansas City, Mo.

Farley & Loetscher Mfg. Co., Dubuque, Iowa Florida Louisiana Red Cypress Co., Jacksonville, Fla.

Frost Lumber Industries, Inc., Shreveport, La. Shevlin Pine Sales Co., Minneapolis, Minn. Upson Co., Lockport, N.Y.

Weyerhaeuser Sales Co., St. Paul, Minn.

BEAD—BASE

Exchange Sawmills Sales Co., Kansas City, Mo.

Frost Lumber Industries, Inc., Shreveport, La. Johns-Manville, New York

Knapp Bros. Mfg. Co., Joliet, Ill.

Milcor Steel Co., Milwaukee, Wis.

Shevlin Pine Sales Co., Minneapolis, Minn.

U. S. Gypsum Co., Chicago

BEAD—CORNER (Metal)

American Brass Co., New York

Armstrong Cork Co., Lancaster, Pa.

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Arm Barr Celo Cert Fir-Flin Hon Insu John Mas Nati U. S Upso Wey Woo

Carr Donl

Arka

Brad Calif Phili Celot Certa Doug Exch

Farley & Loetscher Mfg. Co., Dubuque, Iowa Johns-Manville, New York
Knape & Vogt Mfg. Co., Grand Rapids, Mich. Knapp Bros. Mfg. Co., Joliet, Ill.
Milcor Steel Co., Milwaukee, Wis.
Tylac Co., Monticello, Ill.
U.S. Gypsum Co., Chicago
BEAMS—PRESSED STEEL
BENCH VISES—
See Vises, Bench
BENCHES—SAW—
See Saw Rigs
BEVELS
Stanley Tools, New Britain, Conn.
BINS—CONCRETE
Construction Machinery Co., Waterloo, Iowa
BITS—SCREWDRIVER
Stanley Tools, New Britain, Conn.
BLACKBOARDS—ASBESTOS
Johns-Manville, New York
BLACKBOARDS—GLASS
Libbey-Owens-Ford Glass Co., Toledo, Ohio
Pittsburgh Plate Glass Co., Pittsburgh, Pa.
BLADES—FLOOR SCRAPER
Landon P. Smith, Inc., Irvington, N.J.
BLANKETS—INSULATING
Philip Carey Co., Lockland, Cincinnati, Ohio
Celotex Corp., Chicago
Kimberly-Clark Corp., Neenah, Wis.
Masonite Corp., Chicago
Wood Conversion Co., St. Paul, Minn.
BLINDS—WINDOW
Carr, Adams & Collier Co., Dubuque, Iowa
Curtis Companies, Inc., Clinton, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa
National Door Mfrs. Assn., Chicago
See Hinges, Blind and Shutter
BLOCKS—GLASS—
See Glass Blocks
BLOCKS—HOLLOW BUILDING
Certain-teed Products Corp., New York
BLOWERS—VENTILLATING
Ilg Electric Ventilating Co., Chicago
Modine Mfg. Co., Racine, Wis.
Pacific Gas Radiator Co., Huntington Park,
Calif.
Round Oak Co., Dowagiac, Mich.
BLUEPRINT MACHINES—
See Minghines Bluest the Co.

Certain-teed Products Corp., New York
BLOWERS—VENTILATING
Ilg Electrie Ventilating Co., Chicago
Modine Mfg. Co., Racine, Wis.
Pacific Gas Radiator Co., Huntington Park, Calif.
Round Oak Co., Dowagiac, Mich.
BLUEPRINT MACHINES—
See Machines, Blueprinting
BLUEPRINT PAPER—
See Paper, Blue Print
BOARDS—BULLETIN
Armstrong Cork Co., Lancaster, Pa.
Certain-teed Products Corp., New York
Congoleum-Nairn, Inc., Kearny, N.J.
Homasot Co., Trenton, N.J.
Knape & Vogt Mfg. Co., Grand Rapids, Mich.
Masonite Corp., Chicago
BOARDS—DRAIN
Allegheny Ludlum Steel Corp., Pittsburgh, Pa.
Armstrong Cork Co., Lancaster, Pa.
Bradley Lbr. Co. of Arkansas, Warren, Ark.
Crane Co., Chicago
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Harbor Plywood Corp., Hoquiam, Wash.
Kitchen Maid Corp., Andrews, Ind.
Shevlin Pine Sales Co., Minneapolis, Minn.
Weyerhaeuser Sales Co., Minneapolis, Minn.
Weyerhaeuser Sales Co., Minneapolis, Minn.
Warren-Knight Co., Philadelphia, Pa.
Weyerhaeuser Sales Co., St. Paul, Minn.
David White Co., Milwaukee, Wis.
BOARDS—DRAWING
Armstrong Cork Co., Lancaster, Pa.
Barrett Co., New York
Philip Carey Co., Lockland, Cincinnati, Ohio
Celotex Corp., Chicago
Certain-teed Products Corp., New York
Fir-Tex Insulating Board Co., Portland, Ore.
Flintkote Co., New York
Masonite Corp., Chicago
Upson Co., Lockport, N.Y.
Weyerhaeuser Sales Co., St. Paul, Minn.
BOARDS—Insulating Board Co., Portland, Ore.
Flintkote Co., New York
Masonite Corp., Chicago
Upson Co., Lockport, N.Y.
Weyerhaeuser Sales Co., St. Paul, Minn.
BOARDS—HONNICE, BUILT-IN
Carr, Adams & Collier Co., Dubuque, Iowa
Kitchen Maid Corpor, Andrews, Ind.
Pacific Mutual Door Co., Tacoma, Wash.
BOARDS—HONNICE, BUILT-IN
Carr, Adams & Collier Co., Dubuque, Iowa
Curtis Companies, Inc., Clinton, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Curtis Companies, Inc., Clinton, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Cutis Companies, Inc., Clinton, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Citic Mutual Door Co., Tacoma, Wash.
BOARDS—HONG, Builting Board Co., Portland, Or

Exchange Sawmins Said Mo. Mo. Fir.Tex Insulating Board Co., Portland, Ore. Finthote Co., New York Florida Louisiana Red Cypress Co., Jackson-ville, Fla.

Frost Lumber Industries, Inc., Shreveport, La. Harbor Plywood Corp., Hoquiam, Wash. Homasote Co., Trenton, N.J.
Insulite Co., Minneapolis, Minn.
Johns-Manville, New York
Masonite Corp., Chicago
National Gypsum Co., Buffalo, N.Y.
U. S. Gypsum Co., Chicago
U. S. Plywood Corp., New York
Western Pine Assn., Portland, Ore.
—See page 224
Weyerhaeuser Sales Co., St. Paul, Minn.
Wood Conversion Co., St. Paul, Minn.
BOARDS—SOUND DEADENING
Armstrong Cork Co., Lancaster, Pa.
Certain-teed Products Corp., New York
Douglas Fir Plywood Assn.,
Fir-Tex Insulating Board Co., Portland, Ore.
Homasote Co., Trenton, N.J.
Insulite Co., Minneapolis, Minn.
Johns-Manville, New York
Masonite Corp., Chicago
U. S. Gypsum Co., Chicago
Wood Conversion Co., St. Paul, Minn.
BOARDS—WALL
Allegheny Ludlum Steel Corp., Pittsburgh, Pa.
American Plywood Corp., New London, Wis.
Armstrong Cork Co., Lancaster, Pa.
Philip Carey Co., Lockland, Cincinnati, Ohio Certain-teed Products Corp., New York
Douglas Fir Plywood Assn., Tacoma, Wash.
—See page 224
Fir-Tex Insulating Board Co., Portland, Ore.
Flintkote Co., New York
Gibbs Boardtile Corp., Chicago
Harbor Plywood Corp., Hoquiam, Wash.
Homasote Co., Trenton, N.J.
Insulite Co., Minneapolis, Minn.
Johns-Manville, New York
Marsh Wall Products, Inc., Dover, Ohio
Masonite Corp., Chicago
Mengel Co., Louisville, Ky.
National Gypsum Co., Buffalo, N.Y.
Pacific Mutual Door Co., Tacoma, Wash.
Ruberoid Co., New York
Traco Division, Atlanta, Ga.
Tylac Co., Monticello, Ill.
U. S. Gypsum Co., Chicago
U. S. Plywood Corp., New York
Upson Co., Lockport, N.Y.
Wood Conversion Co., St. Paul, Minn.
BOILERS—HEATING PLANT (GasFired)
Airtemp Division, Atlanta, Ga.
Tylac Co., Monticello, Ill.
U. S. Gypsum Co., Chicago
U. S. Plywood Corp., New York
Upson Co., Lockport, N.Y.
Wood Conversion Co., St. Paul, Minn.
BOILERS—HEATING PLANT (GasPittsburgh Pa.

Wood Conversion Co., St. Paul. Minn.

BOILERS—HEATING PLANT
Fired)
Airtemp Division, Dayton, Ohio
American Radiator & Standard Sanitary Corp.,
Pittsburgh, Pa.
Crane Co., Chicago
General Electric Co., Air Cond., & Comm.
Refrig. Dept., Bloomfield, N.J.
Hotstream Heater Co., Cleveland, Ohio
L. J. Mueller Furnace Co., Milwaukee, Wis.
Norge Heating & Conditioning Division, Detroit, Mich.
Surface Combustion Corp., Toledo, Ohio
BOILERS—HEATING PLANT (OilFired)
Airtemp Division, Dayton, Ohio
American Radiator & Standard Sanitary Corp.,
Pittsburgh, Pa.
Crane Co., Chicago
General Electric Co., Air Cond., & Comm.
Refrig. Dept., Bloomfield, N.J.
Kohler Co., Kohler, Wis.
H. C. Little Burner Co., San Rafael, Calif.
BOILERS—HEATING PLANT (StokerFired)
American Radiator & Standard Sanitary Corp.,

Refrig. Dept., Bloomfeld, N.S.
Kohler Co., Kohler, Wis.
H. C. Little Burner Co., San Rafael, Calif.
BOILERS—HEATING PLANT (Stoker-Fired)
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
Crane Co., Chicago
Kohler Co., Kohler, Wis.
Norge Heating & Conditioning Division, Detroit, Mich.
BOILERS—RANGE (Hot Water Supply)
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
W. A. Case & Son Mfg. Co., Buffalo, N.Y.
Crane Co., Chicago
Hotstream Heater Co., Cleveland, Ohio
BOILER CEMENT—
See Cement, Boiler
BOILER COVERINGS—
See Coverings, Boiler and Pipe
BOLTS—ANCHOR
Donley Brothers Co., Cleveland, Ohio
BOLTS—DOOR—
See Hardware, Door
BOLTS—EXPANSION
National Lead Co., New York
BOLTS—GARAGE DOOR
Allith-Prouty, Inc., Danville, Ill.
Coburn Trolley Track Co., Holyoke, Mass.
Frantz Mfg. Co., Sterling, Ill.
McKinney Mfg. Co., Pittsburgh, Pa.
National Mfg. Co., Sterling, Ill.
McKinney Mfg. Co., Codar Falls, Iowa
BOLTS—SURFACE
Allith-Prouty, Inc., Danville, Ill.
Frantz Mfg. Co., Sterling, Ill.
H. B. Ives Co., New Haven. Conn.
McKinney Mfg. Co., Sterling, Ill.
H. B. Ives Co., New Haven. Conn.
McKinney Mfg. Co., Pittsburgh, Pa.
Stanley Works, New Britain, Conn.
BOLTS—SURFACE
Allith-Prouty, New Britain, Conn.
BOLTS—WINDOW—
See Hardware, Sash
BOND—PLASTER
Armstrong Cork Co., Lancaster, Pa.
Barrett Co., New York
Calbar Paint & Varnish Co., Philadelphia, Pa.
Philip Carey Co., Lockland, Cincinnati, Ohio
L. Sonneborn Sons, Inc., New York
U. S. Gypsum Co., Chicago
BOOKS—BUILDING
American Technical Society, Chicago
John Wiley & Sons. Inc., New York

BOOKS—PLAN
Frost Lumber Industries, Inc., Shreveport, La.
House of the Month Service, Chicago
John Wiley & Sons, Inc., New York
BORING MACHINES—
See Machines, Boring
BOTTLED GAS—
See Gas, Bottled
BOWLS—CLOSET
American Radiator & Standard Sanitary Corp.,
Pittsburgh, Pa.
W. A. Case & Son Mfg. Co., Buffalo, N.Y.
Crane Co., Chicago
Eljer Co., Ford City, Pa.
Kohler Co., Kohler, Wis.
BOXES—MAIL
McKinney Mfg. Co., Pittsburgh, Pa.
Milcor Steel Co., Milwaukee, Wis.
BOXES—MAIL (Built-in)
Cincinnati Iron Fence Co., Cincinnati, Ohio
Donley Brothers Co., Cleveland, Ohio
Majestic Co., Huntington, Ind.
BOXES—METER
F. D. Kees Mfg. Co., Beatrice, Nebr.
Square D Co., Detroit, Mich.
BOXES—MITER
Skilsaw Inc., Chicago
Stanley Tools, New Britain, Conn.
Wilson Metal Products, Co., Columbus, Ohio
BOXES—MIXING
Donley Brothers Co., Cleveland, Ohio
Lansing Co., Lansing, Mich.
Majestic Co., Huntington, Ind.
Milcor Steel Co., Milwaukee, Wis.
BOXES—OUTIET
Frank Adam Electric Co., Appl. & Merch. Dept.,
Bridgeport, Conn.
National Electric Co., Appl. & Merch. Dept.,
Bridgeport, Conn.

National Electric Products Corp., Pittsburgh,
Pa.
BOXES—SWITCH
General Electric Co., Appl. & Merch. Dept.,
Bridgeport, Conn.
F. D. Kees Mfg. Co., Beatrice, Nebr.
National Electric Products Corp., Pittsburgh,
Pa.

National Electric Products Corp., Pittsburgh, Pa.,
Square D Co., Detroit, Mich.
BOXES—TOOL
Landon P. Smith, Inc., Irvington, N.J.
Stanley Tools, New Britain, Conn.
BRACES—CORNER
Frantz Mfg. Co., Sterling, Ill.
F. D. Kees Mfg. Co., Beatrice, Nebr.
Knape & Vogt Mfg. Co., Grand Rapids, Mich.
McKinney Mfg. Co., Pittsburgh, Pa.
National Mfg. Co., Sterling, Ill.
Stanley Works, New Britain, Conn.
BRACKETS—BATHROOM
Crane Co., Chicago
Knape & Vogt Mfg. Co., Grand Rapids, Mich.
Kohler Co., Kohler, Wis.
Miami Cabinet Division of the Philip Carey
Co., Middletown, Ohio
Stanley Works, New Britain, Conn.
BRACKETS—LADDER
Ajax Building Bracket Co., Cleveland Heights,
Ohio
Cincinnati Iron Fence Co., Cincinnati, Ohio

Stanley Works, New Britain, Conn.

BRACKETS—LADDER

Ajax Building Bracket Co., Cleveland Heights, Ohio
Cincinnati Iron Fence Co., Cincinnati, Ohio
Coburn Trolley Track Co., Holyoke, Mass.
Steel Scaffolding Co., Evansville, Ind.
Wagner Mfg. Co., Cedar Falls, Iowa
BRACKETS—ORNAMENTAL
Cincinnati Iron Fence Co., Cincinnati, Ohio
Curtis Companies, Inc., Clinton, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa
BRACKETS—RAIL OR TRACK
Ajax Building Bracket Co., Cleveland Heights,
Ohio
Allith-Prouty, Inc., Danville, Ill.
Cincinnati Iron Fence Co., Gincinnati, Ohio
Coburn Trolley Track Co., Holyoke, Mass.
Curtis Companies, Inc., Clinton, Iowa
Frantz Mfg. Co., Sterling, Ill.
H. B. Ives Co., New Haven, Conn.
Knape & Vogt Mfg. Co., Grand Rapids, Mich.
McKinney Mfg. Co., Pittsburgh, Pa.
National Mfg. Co., Sterling, Ill.
Stanley Works, New Britain, Conn.
Wagner Mfg. Co., Cedar Falls, Iowa
BRACKETS—ROOFING
Ajax Building Bracket Co., Cleveland Heights,
Ohio
Stanley Tools, New Britain, Conn.
Steel Scaffolding Co., Evansville, Ind.
Wagner Mfg. Co., Cedar Falls, Iowa
BRACKETS—SCAFFOLD
Ajax Building Bracket Co., Cleveland Heights,
Ohio
Gabriel Steel Co., Detroit, Mich.
Reliable Jack Co., Dayton, Ohio
Steel Scaffolding Co., Evansville, Ind.
Wagner Mfg. Co., Sterling, Ill.
Knape & Vogt Mfg. Co., Grand Rapids, Mich.
McKinney Mfg. Co., Sterling, Ill.
Knape & Vogt Mfg. Co., Grand Rapids, Mich.
McKinney Mfg. Co., Sterling, Ill.
Knape & Vogt Mfg. Co., Grand Rapids, Mich.
McKinney Mfg. Co., Sterling, Ill.
Stanley Works, New Britain, Conn.
BRACKETS—WALL
Ajax Building Bracket Co., Cleveland Heights,
Ohio
Cincinnati Iron Fence Co., Cincinnati, Ohio
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Knape & Vogt Mfg. Co., Grand Rapids, Mich.
Kohler Co., Kohler, Wis.
Stanley Works, New Britain, Conn.
Wagner Mfg. Co., Cedar Falls, Iowa
BRACKETS—WALL (Electrical)
National Electric Products Corp., Pittsburgh,
Pa.
BREAKFAST NOOKS OR ROOMS
Carr, Adams & Collier Co., Dubuque, Iowa

Pa.
BREAKFAST NOOKS OR ROOMS
Carr, Adams & Collier Co., Dubuque, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa
(Continued on next page)

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BRICK—FIRE
Johns-Manville, New York
BRICK—VENTILATING
Majestic Co., Huntington, Ind.
BRICK CARRIERS—
See Carriers, Brick
BRICK COLORS—
See Colors, Brick
BRICK WATERPROOFING—
See Waterproofing, Brick
BRICKLAYERS CEMENT—
See Cement, Masons'
BRIDGING—FLOOR (Wood)
Florida Louisiana Red Cypress Co., Jacksonville, Fla. Florida Louisiana Red Cypress Co., Jackson-ville, Fla. Frost Lumber Industries, Inc., Shreveport, La. Weyerhaeuser Sales Co., St. Paul, Minn. BRONZE DOORS—

Weyerhaeuser Sales Co., St. Paul, Minn.
BRONZE DOORS—
See Doors, Bronze
BRUSHES—PAINT
Breinig Bros., Hoboken, N.J.
Carr, Adams & Collier Co., Dubuque, Iowa
Lowe Brothers Co., Dayton, Ohio
Pittsburgh Plate Glass Co., Pittsburgh, Pa.
BRUSHES—POLISHING
American Floor Surfacing Machine Co., Toledo, Ohio
Hilger Co., St. Cloud, Minn.
BUBBLING FOUNTAINS—
See Fountains, Drinking
BUCKETS—HOISTING AND DUMPING
Construction Machinery Co., Waterloo, Iowa
Jaeger Machine Co., Columbus, Ohio
BUILDERS' HARDWARE—
See Hardware, Various Kinds
BUILDINGS—PORTABLE
American Rolling Mill Co., Middletown, Ohio
Edwards Mfg. Co., Cincinnati, Ohio
Harbor Plywood Corp., Hoquiam, Wash.
BUILDINGS—STEEL
American Rolling Mill Co., Middletown, Ohio
Edwards Mfg. Co., Cincinnati, Ohio
International Steel Co.—See adv. this page
Tennessee Coal, Iron & R. R. Co., Birmingham,
Ala.
BULKHEADS—RESIDENCE

Tennessee Coal, Iron & R. R. Co., Birmingham, Ala.

BULKHEADS—RESIDENCE
Bilco Mfg. Co., New Haven, Conn.

BURNERS—GARBAGE—

See Incinerators
BURNERS—GAS (Conversion)

American Radiator & Standard Sanitary Corp.,
Pittsburgh, Pa.
Crane Co., Chicago
General Electric Co., Air Cond. & Comm.
Refrig. Dept., Bloomfield, N.J.
L. J. Mueller Furnace Co., Milwaukee, Wis.
Norge Heating & Conditioning Division, Detroit, Mich.
Surface Combustion Corp., Toledo, Ohio
BURNERS—OIL (Conversion)
American Radiator & Standard Sanitary Corp.,
Pittsburgh, Pa.

American Radiator & Standard Sanitary Corp.,
Pittsburgh, Pa.
Calesco Corp., Lynn, Mass.
Crane Co., Chicago
General Electric Co., Air Cond. & Comm. Refrig. Dept., Bloomfield, N.J.
Iron Fireman Mfg. Co., Portland, Ore.
Kohler Co., Kohler, Wis.
H. C. Little Burner Co., San Rafael, Calif.
Lochinvar Division, Dearborn, Mich.
Norge Heating & Conditioning Division, Detroit, Mich.
BUSDUCTS—ELECTRIC
Frank Adam Electric Co., St. Louis, Mo.
BUSTI GAUGES—
See Gauges, Butt
BUTT HINGES—
See Hinges

See Gauges, Butt
BUTT HINGES—
See Hinges
CABINETS—BATHROOM
Carr, Adams & Collier Co., Dubuque, Iowa
Crane Co., Chicago
Curtis Companies, Inc., Clinton, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa
F. H. Lawson Co., Dubuque, Iowa
F. H. Lawson Co., Dubuque, Iowa
C. Middletown, Ohio
CABINETS—DRESSING ROOM
Carr, Adams & Collier Co., Dubuque, Iowa
Curtis Companies, Inc., Clinton, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa
CABINETS—KITCHEN
Carr, Adams & Collier Co., Dubuque, Iowa
Crane Co., Chicago
Curtis Companies, Inc., Clinton, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Crane Co., Chicago
Curtis Companies, Inc., Clinton, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa
General Electric Co., Appl. & Merch. Dept.,
Bridgeport, Conn.
Kitchen Maid Corp., Andrews, Ind.
Pacific Mutual Door Co., Tacoma, Wash.
Youngstown Pressed Steel Div., Warren,
Ohio
CABINETS—MEDICINE—

Pacific Mutual Door Co., Tacoma, Wash.
Youngstown Pressed Steel Div., Warren,
Ohio

CABINETS—MEDICINE—
See Cabinets, Bathroom
CABINETS—RADIATOR—
See Enclosures, Radiator
CABINETS—STORAGE
Carr. Adams & Collier Co., Dubuque, Iowa
Crane Co., Chicago
Curtis Companies, Inc., Clinton, Iowa
Farley & Loetscher Co., Dubuque, Iowa
Kitchen Maid Corp., Andrews, Ind.
CABINET HARDWARE—
See Hardware, Cabinet
CABINET HARDWARE—
CABINET HEATERS—
See Heaters, Cabinet
CABLES—ARMORED
General Electric Co., Appl. & Merch. Dept.,
Bridgeport, Conn.
National Electric Products Corp., Pittsburgh,
Pa.

Pa.

CABLES—ELEVATOR (Electric)
General Electric Co., Appl. & Merch. Dept.,
Bridgeport, Conn.
National Electric Products Corp., Pittsburgh,

CALCIMINE See Kalsomine CALCIUM CHLORIDE Pittsburgh, Pa. Pittsburgh Plate Glass Co., P Solvay Sales Corp., New York CAPS—CHIMNEY

Pittsburgh Plate Glass Co., Pittsburgh, Pa. Solvay Sales Corp., New York

CAPS—CHIMNEY
Edwards Mfg. Co., Cincinnati, Ohio Milcor Steel Co., Milwaukee, Wis.

CAPS—POST
Cincinnati Iron Fence Co., Cincinnati, Ohio Curtis Companies, Inc., Clinton, Iowa Donley Brothers Co., Cleveland, Ohio Majestic Co., Huntington, Ind.
Pacific Mutual Door Co., Tacoma, Wash.

CARPENTERS' TOOLS—
See Name of Tool Desired
CARRIERS—BRICK AND TILE
Donley Brothers Co., Cleveland, Ohio Lansing Co., Lansing, Mich.
Sterling Wheelbarrow Co., Milwaukee, Wis.

CARRIERS—CLOTHES—
See Fixtures, Wardrobe
CARRIERS—OVERHEAD
Allith-Prouty, Inc., Danville, Ill.
Coburn Trolley Track Co., Holyoke, Mass.
Knape & Vogt Mfg. Co., Grand Rapids, Mich.
Wagner Mfg. Co., Cedar Falls, Iowa
CARS—ELEVATOR
Sedgwick Machine Works, New York
Wagner Mfg. Co., Cedar Falls, Iowa
CARTS—CONCRETE
American Cement Machiner Co., Keokuk, Iowa
Construction Machinery Co., Waterloo, Iowa
Jaeger Machine Co., Columbus, Ohio
Lansing Co., Lansing, Mich.
Sterling Wheelbarrow Co., Milwaukee, Wis.
CARTS—DUMP
American Cement Machiner Co., Keokuk, Iowa
Construction Machinery Co., Waterloo, Iowa
Jaeger Machine Co., Columbus, Ohio
Lansing Co., Lansing, Mich.
Sterling Wheelbarrow Co., Milwaukee, Wis.



All-Steel

BUILDINGS

Quick erection, lowest first cost. Firesafe, standardized. Delivery from warehouse stock

INTERNATIONAL STEEL CO.

CARTS—HAND
Lansing Co., Lansing, Mich.
Sterling Wheelbarrow Co., Milwaukee, Wis.
CASEMENT WINDOWS—
See Windows, Casement
CASEMENT WINDOW MOST WINDOWS—
See Hardware, Casement Window
CASINGS—WINDOW (Metal)
Knapp Bros. Mfg. Co., Joliet, Ill.
Mesker Brothers, St. Louis, Mo.
Milcor Steel Co., Milwaukee, Wis.
CASING—WINDOW (Wood)
Arkansas Soft Pine Bureau, Little Rock, Ark.
—See page 224
Bradley Lbr. Co., of Arkansas, Warren, Ark.
Carr, Adams & Collier Co., Dubuque, Iowa
Curtis Companies, Inc., Clinton, Iowa
Exchange Sawmills Sales Co., Kansas City
Mo.

Farley & Loetscher Mfg. Co., Dubuque, Iowa Florida Louisiana Red Cypress Co., Jackson-ville, Fla. Frost Lumber Industries Inc., Shreveport,

La.
Pacific Mutual Door Co., Tacoma, Wash.
Shevlin Pine Sales Co., Minneapolis, Minn.
Southern Pine Lbr. Co., Texarkana, Tex.
Western Pine Assn., Portland, Ore.
—See page 224
Weyerhaeuser Sales Co., St. Paul, Minn.
CATCHES—CABINET—
See Hardware, Cabinet
CATCHES—DOOR—
See Hardware, Door
CAULKING MATERIALS—
See Compounds, Caulking
CEILINGS—METAL.
American Rolling Mill Co., Middletown, Ohio
Carnegie-Illinois Steel Corp., Pittsburgh, Pa.
Edwards Mfg. Co., Cincinnati, Ohio
Milcor Steel Co., Milwaukee, Wis.
CEILINGS—SUSPENDED
Celotex Corp., Chicago

Milcor Steel Co., Milwaukee, Wis.
CEILINGS—SUSPENDED
Celotex Corp., Chicago
Johns-Manville, New York
Milcor Steel Co., Milwaukee, Wis.
U. S. Gypsum Co., Chicago
CEILINGS—TILE
Armstrong Cork Co., Lancaster, Pa.
Celotex Corp, Chicago
Davidson Enamel Co., Clyde, Ohio
Flintkote Co., New York
Gibbs Boardtile Corp., Chicago
Insulite Co., Minneapolis, Minn.
Fir-Tex Insulating Board Co., Portland, Ore.
Johns-Manville, New York
Masonite Corp., Chicago
National Gypsum Co., Buffalo, N.Y.
Tylac Co., Monticella, Ill.
U. S. Gypsum Co., Chicago
Wood Conversion Co., St. Paul, Minn.
CEILINGS—WOOD
Bradley Lbr. Co. of Arkansas, Warren, Ark.
Carr, Adams & Collier Co., Dubuque, Iowa
Exchange Sawmills Sales Co., Kansas City,
Mo.
Florida Louisiana Red Cypress Co., Jackson-

Mo.

Florida Louisiana Red Cypress Co., Jacksonville, Fla.
Frost Lumber Industries Inc., Shreveport, La.
Harbor Plywood Corp., Hoquiam, Wash.

Johns-Manville, New York
Southern Pine Lbr. Co., Texarkana, Tex.
U. S. Plywood Corp., New York
Weyerhaeuser Sales Co., St. Paul, Minn.
CEILING HOAKS—
See Plates, Ceiling
CEILING HOOKS—
See Hooks, Ceiling
CEILLAR DOORS—
See Doors, Cellar
CEILAR DOORS—
See Frames, Basement Window
CEMENT—BOILER
Barber Aaphalt Corp., Barber, N.J.
Philip Carey Co., Lockland, Cincinnati, Ohio
Crane Co., Chicago
Johns-Manville, New York
Pecora Paint Co., Philadelphia, Pa.
Ruberoid Co., New York
L. Sonneborn Sons, Inc., New York
Lehigh Portland Cement Co., Allentown, Pa.
Louis Star Cement Corp., New York
CEMENT—HIGH TEMPERATURE
Armstrong Cork Co., Lancaster, Pa.
Philip Carey Co., Lockland, Cincinnati, Ohio
Johns-Manville, New York
Pecora Paint Co., Philadelphia, Pa.
Ruberoid Co., New York
Universal Atlas Cement Co., New York
Universal Atlas Cement Co., Allentown, Pa.
Louis Ville Cement Co., Cleveland, Ohio
Portland Cement Co., Louis Ville, Ky.
Medusa Portland Cement Co., Cleveland, Ohio
CEMENT—NON-STAINING
Cuis Ville Cement Co., Toledo, Ohio
CEMENT—NON-STAINING
Couls Ville Cement Co., Louis Ville, Ky.
Medusa Portland Cement Co., Cleveland, Ohio
CEMENT—PORTLAND
Lehigh Portland Cement Co., Cleveland, Ohio
CEMENT—PORTLAND
Cheigh Portland Cement Co., Cleveland, Ohio
CEMENT—PORTLAND
CHARLY Co., Lockland, Cincinnati, Ohio
CEMENT—PORTLAND
CHARLY Co., Lockland, Cincinnati, Ohio
CEMENT—PORTLAND
CHARLY Co., Lockland, Cincinnati, Ohio
CEMENT—PORTLAND
CHARLY Co., Lockland, Cincinn

See Accelerators, Cement
CEMENT MIXERS—
See Mixers, Concrete
CEMENT REINFORCING—
See Reinforcing, Concrete and

See Reinforcing, Concrete and Stucco
CEMENT WATERPROOFING—
See Waterproofing, Cement
CESSPOOL TRAPS—
See Traps, Cesspool
CHAINS—DOOR
H. B. Ives Co., New Haven, Conn.
Overhead Door Corp., Hartford City, Ind.
Wagner Mfg. Co., Cedar Falls, Iowa
CHAINS—SASH
Knape & Vogt Mfg. Co. Grand Rapids, Mich.
CHAINS—TRANSOM
H. B. Ives Co., New Haven, Conn.

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CHANNELS—STEEL
Bethlehem Steel Co., Bethlehem, Pa.
Knape & Voyt Mfg. Co., Grand Rapids, Mich.
Milcor Steel Co., Milwaukee, Wis.
Tennssee Coal, Iron & R.R. Co., Birming-han, Ala.
CHEKS—DOOR
Frants Mfg. Co., Sterling, Ill.
Norton Door Closer Co., Chicago
Stanley Works, New Britain, Conn.
Wagner Mfg. Co., Cedar Falls, Iowa
CHEMICAL CLOSETS—
See Closets, Chemical
CHIMES—DOOR
Notone Chimes, Inc., Cincinnati, Ohio
CHISELS—CARPENTERS'
Landon P. Smith, Inc., Irvington, N. J.
Stanley Tools, New Britain, Conn.
CHISELS—CARPENTERS'
Landon P. Smith, Inc., Irvington, N. J.
Stanley Tools, New Britain, Conn.
CHISELS—COLLOW MORTISING
Master Woodworker Mfg. Co., Detroit, Mich.
Walker-Turner Co., Plainfield, N. J.
CHUTES—COAL
Donley Brothers Co., Cleveland, Ohio
Edwards Mfg. Co., Cincinnati, Ohio
Gabriel Steel Co., Detroit, Mich.
Majestic Co., Huntington, Ind.
Mesker Brothers, St. Louis, Mo.
Milcor Steel Co., Milwaukee, Wis.
Vento Steel Products Co., Muskegron, Mich.
CHUTES—CONCRETE
Construction Machinery Co., Waterloo, Iowa
Jaeger Machine Co., Columbus, Ohio
Lansing Co., Lansing, Mich.
CHUTES—MAIL
Donley Brothers Co., Cleveland, Ohio
CIRCUIT BREAKERS—ELECTRIC
Frank Adam Electric Co., St. Louis, Mo.
Square D Co., Detroit, Mich.
CIRCULATORS—FIREPLACE—
See Fireplaces, Heat-Circulating
CIRCULATORS—FIREPLACE—
See Fireplaces, Heat-Circulating
CIRCULATORS—COLUMN
Sterling Wheelbarrow Co., Milwaukee, Wis.
CLAMPS—COLUMN
Sterling Wheelbarrow Co., Milwaukee, Wis.
CLAMPS—COLUMN
Sterling Wheelbarrow Co., Milwaukee, Wis.
CLAMPS—COLUMN
Sterling Wheelbarrow Co., Buffalo, N.Y.
U. S. Gypsum Co., Chicago
Wood Conversion Co., St. Paul, Minn.
National Gypsum Co., Buffalo, N.Y.
U. S. Gypsum Co., Chicago
Wood Conversion Co., Sc. Paul, Minn.
CLOCKS—ELECTRIC
General Electric Co., Appl. & Merch. Dept.,
Bridgeport, Conn.
CLOCKS—ELECTRIC
General Electric Co., Appl. & Merch.
Dept.,
Bridgeport, Conn.
CLOCKS—ELOSET FIXTURES—
See Bowis, Closet
CLOSET TANKS—
See Doors, Clenton, Ill.
Warrotkint Co., Willendelphia, Pa.
David White Co., Milwaukee, Wis.
CLOSET S—CHE

COAL STOKERS—See Stokers, Coal COAL STOVES—
See Ranges
COATINGS—CEMENT
American Fluresit Co., Cincinnati, Ohio Armstrong Cork Co., Lancaster, Pa., Barber Asphalt, Corp., Barber, N. J. Calbar Paint & Varnish Co., Philadelphia, Pa. Celotex Corp., Chicago Colorcrete Industries, Inc., Holland, Mich. Flintkote Co., New York Johns-Manville, New York Medusa Portland Cement Co., Cleveland, Ohio Pittsburgh Plate Glass Co., Pittsburgh, Pa. Ruberold Co., New York L. Sonneborn Sons, Inc., New York Texas Co., New York U. S. Gypsum Co., Chicago COATINGS—ROOF American Fluresit Co., Cincinnati, Ohio Barber Asphalt Corp., Barber, N. J. Barrett Co., New York Reinig Bros., Hoboken, N. J. Calbar Paint & Varnish Co., Philadelphia, Pa. Philip Carey Co., Lockland, Cincinnati, Ohio Celotex Corp., Chicago Certain-teed Products Corp., New York Donley Brothers Co., Cleveland, Ohio

Flintkote Co., New York
Ford Roofing Products Co., Chicago
Johns-Manville, New York
Lowe Brothers Co., Dayton, Ohio
Pittsburgh Plate Glass Co., Pittsburgh, Pa.
Ruberoid Co., New York
L. Sonneborn Sons, Inc., New York
Texas Co., New York
U. S. Gypsum Co., Chicago
COLONIAL HARDWARE—
See Hardware, Colonial
COLONNADES
California Redwood Distributors, Ltd.,
Chicago
Carr, Adams & Collier Co., Dubuque, Iowa
Curtis Companies, Inc., Clinton, Iowa
COLORS—BRICK
Colorcrete Industries, Inc., Holland, Mich.
W. E. Dunn Mfg. Co., Holland, Mich.
U. Sonneborn Sons, Inc., New York
COLORS—CEMENT
Colorcrete Industries, Inc., Holland, Mich.
L. Sonneborn Sons, Inc., New York
COLORS—MORTAR
Colorcrete Industries, Inc., Holland, Mich.
Pecora Paint Co., Philadelphia, Pa.
L. Sonneborn Sons, Inc., New York
COLUMNS—BASEMENT (Metal)
Donley Brothers Co., Cleveland, Ohio
Edwards Mfg. Co., Cincinnati, Ohio
COLUMNS—PORCH (Iros)
Cincinnati Iron Fence Co., Cincinnati, Ohio
COLUMNS—PORCH (Iros)
Cincinnati Iron Fence Co., Dubuque, Iowa
Curtis Companies Inc. (Cittor, Iowa

California Redwood Distributors, Ltd., Unicago
Carr, Adams & Collier Co., Dubuque, Iowa
Curtis Companies, Inc., Clinton, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Facific Mutual Door Co., Tacoma, Wash.
Weyerhaeuser Sales Co., St. Paul, Minn.
COLUMN BASES—
See Bases, Column
COLUMN CLAMPS—
See Clamps, Column
COMBINATION SQUARES—
See Squares, Combination
COMPOUNDS—ANTI-FREEZE
American Fluresit Co., Cincinnati, Ohio
Solvay Sales Corp., New York
L. Sonneborn Sons, Inc., New York
COMPOUNDS—CAULKING
Allmetal Weatherstrip Co., Chicago

American Fluresit Co., Cincinnati, Ohio Solvay Sales Corp., New York
L. Sonneborn Sons, Inc., New York
COMPOUNDS—CAULKING
Allmetal Weatherstrip Co., Chicago
American Fluresit Co., Cincinnati, Ohio
Armstrong Cork Co., Lancaster, Pa.
Breinig Bros., Hoboken, N. J.,
Philip Carey Co., Lockland, Cincinnati, Ohio
Calbar Paint & Varnish Co., Philadelphia, Pa.
W. J. Dennis & Co., Chicago
Donley Brothers Co., Cleveland, Ohio
Flintkote Co., New York
Ford Roofing Products Co., Chicago
Johns-Manville, New York
Master Metal Strip Service, Inc., Chicago
National Lead Co., New York
Pecora Paint Co., Philadelphis, Pa.
L. Sonneborn Sons, Inc., New York
COMPOUNDS—GLAZING
Breinig Bros., Hoboken, N. J.
Calbar Paint & Varnish Co., Philadelphis, Pa.
L. Sonneborn Sons, Inc., New York
COMPOUNDS—GLAZING
Breinig Bros., Hoboken, N. J.
Calbar Paint & Varnish Co., Philadelphis, Pa.
L. Sonneborn Sons, Inc., New York
COMPOUNDS—WATERPROOFING—
See Waterproofing
COMPRESSORS—AIR
Homelite Corp., Port Chester, N.Y.
CONCRETE BINS—
See Blns, Concrete
CONCRETE BLOCK MACHINES—
See Bachines, Concrete Block
CONCRETE BLOCK MACHINES—
See Gentes, Concrete
CONCRETE BLOCK MACHINES—
See Chutes, Concrete
CONCRETE INSERTS—
See Chutes, Concrete
CONCRETE MIXERS—
See Mixers, Concrete
CONCRETE VIBRATORS—
See Vibratora, Concrete; also Machines, Tamping
CONDUCTOR PIPE—
See Vibratora, Concrete; Concrete; Concrete; Concrete; Concrete; Concret

Pa.
CONNECTORS—METAL (Split Ring,
Toothed Ring, Shear Plate)
Timber Engineering Co., Washington, D.C.
CONTRACTORS' EQUIPMENT—
See also Hoists, Building Material;
Pumps, Contractors' and Drain;
Winches
C. H. & E. Mfg. Co., See Adv. this page

SAW RIGS

PUMPS

MORTAR MIXERS CONTRACTORS BAR CUTTERS BAR BENDERS EQUIPMENT

C. H. & E. MANUFACTURING CO. 3848 N. Palmer St., Milwaukee, Wis.

CONTRACTORS' HOISTS—
See Hoists, Building Material
CONTROLS—HEATING—
See Regulators, Furnace;
Thermostats

CONVECTORS
Crane Co., Chicago
Modine Mg. Co., Racine, Wis.
CONVECTOR ENCLOSURES—
See Enclosures, Convector
Convertible Levels—
See Levels
COOLERS—ROOM
Airtemp Division, Dayton, Ohio
lig Electric Ventilating Co., Chicago
Modine Mg. Co., Racine, Wis.
Norge Heating & Conditioning Division, Detroit, Mich.
COOLERS—WATER (Ice)
Modine Mg. Co., Racine, Wis.
COOLING SYSTEMS—Central
Airtemp Division, Dayton, Ohio
lig Electric Ventilating Co., Chicago
International Harvester Co., Chicago
COPPER—ROLL AND SHEET
American Brass Co., New York
Edwards Mg. Co., Cincinnati, Ohio
Milcor Steel Co., Milwaukee, Wis.
COPPER SHINGLES—
See Roofing, Copper Shingles
COPPER SHINGLES—
See Roofing, Copper Shingles
CORD—AWNING—
See Roofing, Copper Shingles
CORD—SASH
Allmetal Weatherstrip Co., Chicago
Farley & Loetscher Mg. Co., Dubuque, Iowa
Puritan Cordage Mills, Inc., Louisville, Ky.
Samson Cordage Works, Boston, Mass.
CONTCRIBS—PORTABLE
B & T Floor Co., Columbus, Ohio
Illinois Wire & Mg. Co., Grand Rapids, Mich.
Mid-States Steel & Wire Co., Crawfordsville,
Ind.
Tylac Co., Monticello, Ill.
U. S. Gypsum Co., Chicago
CONCRES—METAL
American Brass Co., New York
Armstrong Cork Co., Lancaster, Pa.
W. J. Dennis & Co., Chicago
Donley Brothers Co., Cleveland, Ohio
Edwards Mg. Co., Glean, Ohio
Edwards Mg. Co., Grand Rapids, Mich.
Milcor Steel Co., Milwaukee, Wis.
CORESPONDENCE SCHOOLS—
See Brace, Correspondence
COUNTER TOPS—
See Brace, Correspondence
COUNTER TOPS—
See Brace, Correspondence
COUNTER TOPS—
See Base Cove
COVERINGS—FLOOR (Rubber)
Armstrong Cork Co., Lancaster, Pa.
Ph

Allegheny Luddum Steel Corp., Pittsburgh, Pa.

Armstrong Cork Co., Lancaster, Pa.
Bradley Lbr. Co. of Arkansas, Warren, Ark.
Celotex Corp., Chicago
Congoleum-Nairn Inc., Kearny, N.J.
Davidson Enamel Co., Clyde, Ohio
Flintkote Co., New York
Gibbs Boardtile Corp., Chicago
Homasonte Co., Trenton, N. J.
Johns-Manville, New York
Marsh Wall Products, Inc., Dover, Ohio
Masonite Corp., Chicago
National Gypsum Co., Buffalo, N.Y.
Pittsburgh Plate Glass Co., Pittsburgh, Pa.
Ruberoid Co., New York
Standard Coated Products Corp., New York
Standard Coated Products Corp., New York
Tile-Tex Co., Chicago Heights, Ill.
Traco Division, Atlanta, Ga.
Tylac Co., Monticello, Ill.
U. S. Gypsum Co., Chicago
U. S. Plywood Corp., New York
Upson Co., Lockport, N.Y.
Wood Conversion Co., St. Paul, Minn.
COVERINGS—WATERPROOF
American Fluresit Corp., Barber, N. J.
Barrett Co., New York
Breinig Bros., Hoboken, N. J.
(Continued on next page)

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Donley Bros. Co., Cleveland, Ohio
Johns-Manville, New York
Medusa Portland Cement Co., Cleveland, Ohio
Sisalkraft Co., Chicago
Tylac Co., Monticello, Ill.
COVERS—CISTERN
Donley Brothers Co., Cleveland, Ohio
Majestic Co., Huntington, Ind.
COVERS—COAL HOLE
Donley Brothers Co., Cleveland, Ohio
Majestic Co., Huntington, Ind.
Wooster Products, Inc., Wooster, Ohio
COVERS—MANHOLE
Crane Co., Chicago
Donley Brothers Co., Cleveland, Ohio
Majestic Co., Huntington, Ind.
Wooster Products, Inc., Wooster, Ohio
COVERS—MANHOLE
Crane Co., Chicago
Donley Brothers Co., Cleveland, Ohio
Majestic Co., Huntington, Ind.
Wooster Products, Inc., Wooster, Ohio
COVERS—RADIATOR—
See Enclosures, Radiator
CVERS—RADIATOR—
See Enclosures, Radiator
CRAYONS—LUMBER
Warren-Knight Co., Philadelphia, Pa.
David White Co., Milwaukee, Wis.
CULVERT FORMS—
See Pipe, Culvert
CULVERT FORMS—
See Forms and Molds
CURTAINS—ASBESTOS
Johns-Manville, New York
CUT-OUTS—ELECTRICAL
General Electric Co., Appl. & Merch. Dept.,
Bridgeport, Conn.
Square D Co., Detroit, Mich.
CUTTERS—ASBESTOS SHINGLE
Ajax Building Bracket Co., Cleveland Heights,
Ohio
Ohio
Philip Carey Co., Lockland, Cincinnati, Ohio

Bridgeport, Conn.

Square D Co., Detroit, Mich.

CUTTERS—ASBESTOS SHINGLE

Ajax Building Bracket Co., Cleveland Heights,
Ohio

Philip Carey Co., Lockland, Cincinnati, Ohio
Johns-Manville, New York
Ruberoid Co., New York
U. S. Gypsum Co., Chicago
CUTTERS—DADO

American Saw Mill Machinery Co., Hackettstown, N.J.

Delta Mfg. Co., Chicago
DeWalt Products Corp., Lancaster, Pa.
Mall Tool Co., Chicago
Master Woodworker Mfg. Co., Detroit, Mich.
Walker-Turner Co., Plainfield, N.J.

CUTTERS—FIBREBOARD

Kimball Mfg. Co., Royal Oak, Mich.

CUTTERS—HTEREBOARD

Kimball Mfg. Co., Royal Oak, Mich.

CUTTERS—MITER

A. Markwell Mfg. Co., New York
CUTTERS—MOULDING

American Saw Mill Machinery Co., Hackettstown, N.J.

Delta Mfg. Co., Chicago
DeWalt Products Corp., Lancaster, Pa.

Master Woodworker Mfg. Co., Detroit, Mich.
Walker-Turner Co., Plainfield, N.J.

Wilson Metal Products Corp., Columbus, Ohio

CUTTERS—PIPE

Crane Co., Chicago
DeWalt Products Corp., Lancaster, Pa.

Master Woodworker Mfg. Co., Detroit, Mich.
Walker-Turner Co., Plainfield, N.J.

CUTTERS—SASH
Delta Mfg. Co., Chicago
DeWalt Products Corp., Lancaster, Pa.

Master Woodworker Mfg. Co., Detroit, Mich.
Walker-Turner Co., Plainfield, N.J.

CUTTERS—SLATE

Ajax Building Bracket Co., Cleveland Heights,
Ohio
DeWalt Products Corp., Lancaster, Pa.

CUTTERS—SLATE

Ajax Building Bracket Co., Cleveland Heights,
Ohio
DeWalt Products Corp., Lancaster, Pa.

CUTTERS—SLATE

Ajax Building Bracket Co., Cleveland, Ohio
Gabriel Steel Co., Detroit, Mich.

Modack Electric Tool Corp., Chicago

DADO CUTTERS—

See Cutters, Dado

DAMPERO-FIREPLACE

Donley Brothers Co., Cleveland, Ohio
Gabriel Steel Co., Betroit, Mich.

Majestle Co., Huntington, Ind.

Mesker Brothers, St. Louis, Mo.

Superior Fireplace Co., Lockland, Cincinnati, Ohio
Barber Asphalt Corp., Barber, N.J.

Barrett Co., New York

Calbar Paint & Varnish Co., Philadelphia, Pa.

Sisalkraft Co. Chicago

DEADHPROOFING

American Fluresit Co., Cleveland, Ohio
Fintkote Co., New York

Pecora Paint Co., Chicago

DEADENERS—SOUND

See Bo

DESIGNS—
See Home Designs, Plans and Sug-

DIMENSION STOCK—See Stock, Di-

DIMENSION STOCK—See Stock, Dimension
DISAPPEARING STAIRS—See Stairs,
Disappearing
DISHWASHERS—ELECTRIC
Edison General Electric Appliance Co., Chicago
DIVIDERS—See Instruments, Drawing
DOMES—STEEL
Milcor Steel Co., Milwaukee, Wis.
DOME DAMPERS—See Dampers, Fire-

DOME DAMPERS—See Damper place
place
DOORS—ACCESS
Donley Brothers Co., Cleveland, Ohio
Majestic Co., Huntington, Ind.
Milcor Steel Co., Milwaukee, Wis.
DOORS—AIRPORT
Kinnear Mfg. Co., Columbus, Ohio
Mesker Brothers, St. Louis, Mo.

Overhead Door Corp., Hartford City, Ind.
Wagner Mfg. Co., Cedar Falls, Iowa
DOORS—ALUMINUM and BRONZE
Kawneer Co., Niles, Mich.
DOORS—ASBESTOS
Johns-Manville, New York
Ruberold Co., New York
DOORS—ASHPIT
Donley Brothers Co., Cleveland, Ohio
Gabriel Steel Co., Detroit, Mich.
Majestic Co., Huntington, Ind.
Superior Fireplace Co., Los Angeles, Cal.
DOORS—CELLAR (Metal)
Bilco Mfg. Co., New Haven, Conn.
Cincinnati Iron Fence Co., Cincinnati, Ohio
Mesker Brothers, St. Louis, Mo.
DOORS—CELLAR (Wood)
Carr, Adams & Collier Co., Dubuque, Iowa
Curtis Companies, Inc., Clinton, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa
DOORS—CELLAR (Wood)
Carr, Adams & Collier Co., Dubuque, Iowa
DOORS—CELLAN (Wood)
Carr, Service Co., Cleveland, Ohio
Gabriel Steel Co., Detroit, Mich.
Majestic Co., Huntington, Ind.
Mesker Brothers, St. Louis, Mo.
Milcor Steel Co., Detroit, Mich.
Majestic Co., Huntington, Ind.
Mesker Brothers, St. Louis, Mo.
Milcor Steel Co., Cleveland, Ohio
Gabriel Steel Co., Detroit, Mich.
Majestic Co., Huntington, Ind.
U. S. Gypsum Co., Chicago
DOORS—ELEVATOR
Sedgwick Machine Works, New York
DOORS—FIRE
Detroit Steel Products Co., Detroit, Mich.
Edwards Mfg. Co., Columbus, Ohio
Wagner Mfg. Co., Columbus, Ohio
Wagner Mfg. Co., Cedar Falls, Iowa
DOORS—FIREPROOF (Metal Covered)
Edwards Mfg. Co., Cincinnati, Ohio
Coburn Trolley Track Co., Holyoke, Mass.
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Cincinnati Iron Pence Co., Cincinnati, Ohio
Coburn Trolley Track Co., Holyoke, Mass.
Farley & Loetscher Mfg. Co., Dubuque, Iowa
DOORS—GARAGE (Metal)
Barber-Coleman Co., Rockford, Ill.
Edwards Mfg. Co., Cedar Falls, Iowa
DOORS—GARAGE (Metal)
Barber-Coleman Co., Rockford, Ill.
Carr, Adams & Collier Co., Dubuque, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa
DOORS—GARAGE (Wetal)
Barber-Coleman Co., Rockford, Ill.
Carr, Adams & Collier Co., Dubuque, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Farley & L

Farley & Loetscher Mfg. Co., Dubuque, Iowa
Fir Door Institute, Tacoma, Wash.

—See page 224
Harbor Plywood Corp., Hoquiam, Wash.
Kinnear Mfg. Co., Columbus, Ohio
Majestic Co., Huntington, Ind.
National Door Mfrs. Assn., Chicago

—See page 224
Overhead Door Corp., Hartford City, Ind.
Pacific Mutual Door Co., Tacoma, Wash.
Paine Lumber Co., Oshkosh. Wis.
Rowe Mfg. Co., Galesburg, Ill.
Stanley Works, New Britain, Conn.
Wagner Mfg. Co., Cedar Falls, Iowa

DOORS—GLASS
Pittsburgh Plate Glass Co., Pittsburgh, Pa.

DOORS—GRILLED
Curtis Companies, Inc., Clinton, Iowa
Harbor Plywood Corp., Hoquiam, Wash.
Pacific Mutual Door Co., Tacoma, Wash.
DOORS—HARDWOOD (Solid and Veneered)

American Plywood Corp. New London Wish

Pacific Mutual Door Co., Tacoma, Wash.

DOORS—HARDWOOD (Solid and Veneered)

American Plywood Corp., New London, Wis.
Carr. Adams & Collier Co., Dubuque, Iowa
Curtis Companies, Inc., Clinton, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Harbor Plywood Corp., Hoquiam, Wash.
Johns-Manville, New York
National Door Mfrs. Assn., Chicago
—See page 224
Pacific Mutual Door Co., Tacoma, Wash.
U. S. Plywood Corp, New York
DOORS—HOLLOW CORE
American Plywood Corp., New London, Wis.
Paine Lumber Co., Oshkosh, Wis.
DOORS—HOLLOW METAL
Detroit Steel Products Co., Detroit, Mich.
Edwards Mfg. Co., Cincinnati, Ohio
Mesker Brothers, St. Louis, Mo.



SASGEN DERRICK CO.

DOORS—IRON
Cincinnati Iron Fence Co., Cincinnati, Ohio
Detroit Steel Products Co., Detroit, Mich.
Edwards Mfg. Co., Cincinnati, Ohio
Mesker Brothers, St. Louis, Mo.
DOORS—KALAMEIN
Edwards Mfg. Co., Cincinnati, Ohio
DOORS—OVERHEAD
Allith-Prouty, Inc., Danville, Ill.
Barber-Coleman Co., Rockford, Ill.
Carr, Adams & Collier Co., Dubuque, Iowa
Coburn Trolley Track Co., Holyoke, Mass.

Curtis Companies, Inc., Clinton, Iowa Edwards Mfg. Co., Cincinnati, Ohio Farley & Loetscher Mfg. Co., Dubuque, Iowa Fir Coor Institute, Tacoma, Wash. Farley & Loetscher Mag. Com, Nash.

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Frantz Mfg. Co., Sterling, Ill.

Harbor Plywood Corp., Hoquiam, Wash.
Kinnear Mfg. Co., Columbus, Ohio
Majestic Co., Huntington, Ind.
Mesker Brothers, St. Louis, Mo.

National Door Mfrs. Assn., Chicago

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National Mfg. Co., Sterling, Ill.
Overhead Door Corp., Hartford City, Ind.
Pacific Mutual Door Co., Tacoma, Wash.
Rowe Mfg. Co., Galesburg, Ill.
Stanley Works, New Britain, Conn.
Wagner Mfg. Co., Cedar Falls, Iowa

DOORS—RESIDENCE (Entrance, Interior, etc.)

ior, etc.)

American Plywood Corp., New London, Wis.
California Redwood Distributors, Ltd., Chi-

cago cago and & Collier Co., Dubuque, Iowa Curtis Companies, Inc., Clinton, Iowa Farley & Loetscher Mfg. Co., Dubuque, Iowa Fir Door Institute, Tacoma, Wash.

Carr, Adams & Collier Co., Dubuque, Iowa
Curtis Companies, Inc., Clinton, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Fir Door Institute, Tacoma, Wash.
—See page 224
Huttig Mfg. Co., Muscatine, Iowa
Frost Lumber Industries, Inc., Shreveport, La.
Mengel Co., Louisville, Ky.
National Door Mfrs. Assn., Chicago
—See page 224
Pacific Mutual Door Co., Tacoma, Wash.
Paine Lumber Co., Oshkosh, Wis.
DOORS—ROLLING (Steel)
Edwards Mfg. Co., Columbus, Ohio
Wagner Mfg. Co., Cedar Falls, Iowa
DOORS—ROLLING (Wood)
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Stanley Works, New Britain, Conn.
Wagner Mfg. Co., Cedar Falls, Iowa
DOORS—SCREEN
Carr, Adams & Collier Co., Dubuque, Iowa
Curtis Companies, Inc., Clinton, Iowa
W. J. Dennis & Co., Chicago
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Harbor Plywood Corp., Hoquiam, Wash.
National Door Mfrs. Assn., Chicago
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Harbor Plywood Corp., Hoquiam, Wash.
National Door Mfrs. Assn., Chicago
Kawneer Mfg. Co., Cedar Falls, Iowa
Weyerhaeuser Sales Co., St. Paul, Minn.
DOORS—SHOWER STALL
Crane Co., Chicago
Kawneer Co., Niles, Mich.
Henry Weis Mfg. Co., Elkhart, Ind.
DOORS—SHOWER
STALL
Crane Co., Chicago
Kawneer Co., Niles, Mich.
Henry Weis Mfg. Co., Elkhart, Ind.
DOORS—SLDEWALK
Bilco Mfg. Co., New Haven, Conn.
Cincinnati Iron Fence Co., Cincinnati, Ohio
Curtis Companies, Inc., Clinton, Iowa
Detroit Steel Products Co., Detroit, Mich.
Majestic Co., Huntington, Ind.

DOORS—SLDING
Carr, Adams & Collier Co., Dubuque, Iowa
Cincinnati Iron Fence Co., Cincinnati, Ohio
Curtis Companies, Inc., Clinton, Iowa
Detroit Steel Products Co., Detroit, Mich.
Edwards Mfg. Co., Cincinnati, Ohio
Curtis Companies, Inc., Clinton, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Curtis Companies, Inc., Clinton, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Curtis Companies, Inc., Clinton, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Curtis Companies, Inc., Clinton, Iowa
Farle

DOORS—SIUMM
California Redwood Distributors, Ltd., Chicago
Carr, Adams & Collier Co., Dubuque, Iowa
Curtis Companies, Inc., Clinton, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Harbor Plywood Corp., Hoquiam, Wash.
Mesker Brothers, St. Louis, Mo.
Pacific Mutual Door Co., Tacoma, Wash.
Weyerhaeuser Sales Co., St. Paul, Minn.
DOORS—STORM AND SCREEN COMBINED
Carr, Adams & Collier Co., Dubuque, Iowa
Curtis Companies, Inc., Clinton, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Pacific Mutual Door Co., Tacoma, Wash.
DOORS—TINCLAD
Edwards Mfg., Cincinnati, Ohio
Overhead Door Corp., Hartford City, Ind.
DOORS—TOLLET STALL
Crane Co., Chicago

DOORS—TOILET STALL

Crane Co., Chicago
DOOR BOLTS—See Hardware, Door
DOOR BUTTS—See Hinges, Butt
DOOR CATCHES—See Hardware, Door
DOOR CHAINS—See Chains, Door
DOOR CHECKS—See Checks, Door
DOOR CHIMES—
See Chimes Door See Chimes, Door DOOR CLOSERS—See Checks, Door

Cran Donle Maje Rarre

> Cran Maje Knap

Delta Mall Parai Skils: Stanl Walk J. D. Rlack R. L. Mall Skils: Speed Stanl

> Synti Mall Land Synta Woda

Co

Solva Gene Br Knap Sedg Donle

Gabri Maje Super

Amer Califo cag Edwa Mid-S Ind Milco Weye

Clark Skils: Lande Crane Edwa Mileo

DOOR FRAMES—See Frames, Door DOOR GUARDS—See Guards, Door DOOR HARDWARE—See Hardware Door DOOR HOLDERS—See Holders, Door DOOR JAMBS—See Jambs, Door DOOR KNOCKERS—See Hardware, DOOR LOCKS—See Locks, Door DOOR LOCK MORTISERS—See Mortis-ers, Door Lock DOOR OPENERS (Electric)—See Open-DOOR OPENERS (Electric)—See Openers, Door
DOOR PULLS—See Hardware, Door
DOOR PULLS—See Hardware, Door
DOOR ROLLERS—See Rollers, Door
DOOR STOPS—See Stops, Door
DOOR STOPS—See Stops, Door
DOOR TRIM—See Trim, Door
DRAFTING ROOM FURNITURE—See
Furniture, Drafting Room
DRAINS—FLOOR
Crane Co., Chicago
Donley Brothers Co., Cleveland, Ohio
Majestic Co., Huntington, Ind.
DRAINS—ROOF
Barrett Co., New York
DRAIN BOARDS—See Boards, Drain
DRAIN PIPE—See Pipe, Drain
DRAIN PIPE—See Pipe, Drain
DRAIN PIPE—See Pipe, Drain
DRAIN PIPE—See Pumps, Drain
DRAINERS—CELLAR
Bilco Mfg. Co., New Haven, Conn.
Crane Co., Chicago
Majestic Co., Huntington, Ind.
DRAWER SLIDES
Knape & Vogt Mfg. Co., Grand Rapids, Mich.
DRAWING BOARDS—See Boards,
Drawing
DRAWING INSTRUMENTS—See in-

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nd.

Door

Drawing
DRAWING INSTRUMENTS—See instruments, Drawing
DRAWING PAPER—See Paper, Draw-

DRAWING INSTRUMENTS—See instruments, Drawing
DRAWING PAPER—See Paper, Drawing
DRILLS—BENCH
Black & Decker Mfg. Co., Towson, Md.
Delta Mfg. Co., Chicago
Mall Tool Co., Chicago
Paramount Products Co., New York
Skilsaw, Inc., Chicago
Stanley Tools, New Britain, Conn.
Walker-Turner Co., Plainfield, N.J.
J. D. Wallace & Co., Chicago
DRILLS—ELECTRIC
Black & Decker Mfg. Co., Towson, Md.
R. L. Carter Division, New Britain, Conn.
Mall Tool Co., Chicago
Speedway Mfg. Co., Cicero, Ill.
Stanley Electric Tool Division, New Britain,
Conn.
Syntron Co., Homer City, Pa.
Walker-Turner Co., Plainfield, N.J.
Wodack Electric Tool Corp., Chicago
DRILLS—STONE
Mall Tool Co., Chicago
Landon P. Smith Co., Irvington, N.J.
Syntron Co., Homer City, Pa.
Wodack Electric Tool Corp., Chicago
DRILLING MACHINERY—See Machinery, Drilling
DRINKING FOUNTAINS—
See Fountains, Drinking
DRIVERS—BRAD. GLAZIERS' POINT
A. Markwell Mfg. Co., New York
DRYERS—AIR
Solvay Sales Corp., New York
DRYERS—AIR
Solvay Sales Corp., New York
DRYERS—LAUNDRY
General Electric Co., Appl. & Merch. Dept.,
Bridgeport, Conn.
Knape & Vogt Mfg. Co., Grand Rapids, Mich.
DUMBWAITERS
Kimball Bros. Co., Council Bluffs, Iowa
Sedgwick Machine Works, New York
DUMPS—ASH
Donley Brothers Co., Cleveland, Ohio
Gabriel Steel Co., Detroit, Mich.
Majestic Co., Huntington, Ind.
Superior Fireplace Co., Los Angeles, Calif.
DUMP CARTS—
See Carts, Dump
EAVES TROUGHS—
See also Gutters
American Rolling Mill Co., Middletown, Ohio
California Redwood Distributors, Ltd., Chicago
Edwards Mfg. Co., Cincinnati, Ohio
Mid-States Steel & Wire Co., Crawfordsville,
Ind.

Edwards Mfg. Co., Cincinnati, Ohio Mid-States Steel & Wire Co., Crawfordsville.

Mid-States Steel & Wire Co., Crawfordsville, Ind.
Milcor Steel Co., Milwaukee, Wis.
Weyerhaeuser Sales Co., St. Paul. Minn.
EAVES TROUGH HANGERS—
See Hangers, Eaves Trough
EAVES TROUGH OUTLETS—
See Outlets, Eaves Trough
EDGE PROTECTORS—
See Protectors
EDGERS—FLOOR
Clarke Sanding Machine Co., Muskegon, Mich.
Skilsaw, Inc., Chicago
Landon P. Smith. Inc., Irvington, N.J.
ELBOWS—COPPER
Cnne Co., Chicago
Edwards Mfg. Co., Cincinnati, Ohio
Milcor Steel Co., Milwaukee, Wis.
ELBOWS—SHEET METAL
Edwards Mfg. Co., Cincinnati, Ohio
Mid-States Steel & Wire Co., Crawfordsville,
Ind.
Milcor Steel Co., Milwaukee, Wis.
ELECTRIC CUT-OUTS—

and.

cor Steel Co., Milwaukee, Wis.

ELECTRIC CUT-OUTS—
See Cut-outs, Electric

ELECTRIC DRILLS—
See Drills, Electric

ELECTRIC GENERATORS—
See Generators, Electric

ELECTRIC GLUEPOTS—
See Gluepots, Electric

ELECTRIC GRATES—

See Furnishings, Fireplace ELECTRIC HAMMERS— See Hammers, Electric See Hammers, Electric
ELECTRIC HOISTS
See Hoists, Electric
ELECTRIC MOTORS
See Motors ELECTRIC MOTORS—
See Motors, Electric
ELECTRIC OUTLETS—
See Outlets, Electric
ELECTRIC SAWS—
See Saws, Electric
ELECTRIC SOCKETS—
See Sockets, Electric
ELECTRIC WIRING EQUIPMENT—
See Wiring Equipment, Electric

BOOSTER FANS

Modernizes any make or type of warm air heating plant Clean, efficient, quiet, and automatic

ATTIC FANS

WAYNE AUTOMATIC RELAY CO. Ft. Wayne, Ind.

WAYNE AUTOMATIC RELAY CO.

Ft. Wayne, Ind.

ELEVATORS—ELECTRIC
Sedgwick Machine Works, New York
ELEVATORS—HAND-OPERATED
Kimball Bros. Co., Council Bluffs, Iowa
Sedgwick Machine Works, New York
ELEVATORS—PUSH BUTTON
Sedgwick Machine Works, New York
ELEVATORS—SIDEWALK
Kimball Bros. Co., Council Bluffs, Iowa
Sedgwick Machine Works, New York
ELEVATOR ENCLOSURES—
See Enclosures, Elevator
ELEVATOR GATES—
See Enclosures, Elevator
ELEVATOR GATES—
See Cates, Elevator
ELEVATOR GATES—
See Gates, Elevator
ELEVATOR GATES—
See Gates, Elevator
ELEVATOR GATES—
See Cates, Elevator
ELEVATOR GATES—
See Gates, Elevator
ELEVATOR GATES—
See Cates, Elevator
ENAMELS
Barrett Co., New York
Breinig Bros., Hoboken, N.J.
Calbar Paint & Varnish Co., Philadelphia, Pa.
Lowe Brothers Co., Dayton, Ohio
Pittsburgh Plate Glass Co., Pittsburgh, Pa.
L. Sonneborn Sons, Inc., New York
ENCLOSURES—CONVECTOR
Crane Co., Chicago
Modine Mfg. Co., Racine, Wis.
ENCLOSURES—ELEVATOR
Sedgwick Machine Works, New York
U. S. Gypsum Co., Chicago
ENCLOSURES—PORCH (Glass)
Carr, Adams & Collier Co., Dubuque, Iowa
Cincinnati Iron Fence Co., Cincinnati, Ohio
Curtis Companies, Inc., Clinton, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Curtis Companies, Inc., Clinton, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa
ENCLOSURES—PORCH (Screen)
Carr, Adams & Collier Co., Dubuque, Iowa
ENCLOSURES—RADIATOR
American Radiator & Standard Sanitary Corp.,
Pittsburgh, Pa.
Crane Co., Chicago
ENGINES—RADIATOR
American Radiator & Standard Sanitary Corp.,
Pittsburgh, Pa.
Crane Co., Chicago
ENGINES—GASOLINE
International Harvester Co., Chicago
ENGINES—GASOLINE
International Harvester Co., Chicago
ENGINES—CASOLINE
International Harvester Co., Chicago
ENGINES—CASOLINE
International Harvester Co., Chicago
ENGINES—KEROSENE
International Harvester Co., Chicago
ENGINES—CASOLINE
International Harvester Co., Chicago
ENGINES—KEROSENE
International Harvester Co., Chicago
ENGINES—Co., Sterling, Ill.
Milcor Steel Co., Milwaukee, Wis.
Wagner Mfg. Co., Cedar Falls, Iowa
EQUIPMENT—See Folts, Milland

See Bolts, Expansion EXPANSION JOINTS— See Windows, Factory

See Windows, Factory

See Windows, Factory

ONE Machine Files ALL Saws

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FANS—ATTIC VENTILATING
Crane Co., Chicago
General Electric Co., Appl. & Merch. Dept.,
Bridgeport, Conn.
Ilg Electric Ventilating Co., Chicago
Majestic Co., Huntington, Ind.
Victor Electric Products, Inc., Cincinnati,
Ohio
FANS—EXHAUST
Ilg Electric Ventilating Co., Chicago
Shepler Mfg. Co., Pittsburgh, Pa.
Victor Electric Products, Inc., Cincinnati,
Ohio
FANS—FURNACE
American Radiator & Standard Sanitary Corp.,
Pittsburgh, Pa.
Henry Furnace & Foundry Co., Cleveland,
Ohio
Majestic Co., Huntington, Ind.

Ohio
Majestic Co., Huntington, Ind.
L. J. Mueller Furnace Co., Milwaukee, Wis.
Norge Heating & Condition Division, Detroit,
Mich.
Pacific Gas Radiator Co., Huntington Park,
Calif.
Round Oak Co., Dowagiac, Mich.
Rybolt Heater Co., Ashland, Ohio
Victor Electric Products, Inc., Cincinnati,
Ohio
Wayne Automatic Belay Co., Secretary, 11

Wayne Automatic Relay Co.—See adv. this

Round Oak Co., Dowagiac, Mich.
Ryboit Heater Co., Ashland, Ohio
Victor Electric Products, Inc., Cincinnati,
Ohio
Wayne Automatic Relay Co.—See adv. this
page
FANS—KITCHEN—
See Ventilators, Kitchen
FARM LEVELS—
See Levels
FAUCETS
American Radiator & Standard Sanitary Corp.,
Pittsburgh, Pa.
Crane Co., Chicago
Kohler Co., Kohler, Wis.
FELTS—ASPHALT-SATURATED
Armstrong Cork Co., Lancaster, Pa.
Barber Asphalt Corp., Barber, N.J.
Barrett Co., New York
Philip Carey Co., Lockland, Cincinnati, Ohio
Celotex Corp., Chicago
Certain-teed Products Corp., New York
Fintkote Co., New York
Ruberoid Co., New York
Ruberoid Co., New York
Philip Carey Co., Lockland, Cincinnati, Ohio
Celotex Corp., Chicago
FELTS—INSULATING
Armstrong Cork Co., Lancaster, Pa.
Barber Asphalt Corp., Barber, N.J.
Barrett Co., New York
Philip Carey Co., Lockland, Cincinnati, Ohio
Celotex Corp., Chicago
Certain-teed Products Corp., New York
Philip Carey Co., Lockland, Cincinnati, Ohio
Celotex Corp., Chicago
Certain-teed Products Corp., New York
Filitkote Co., New York
Ruberoid Co., New York
Ruberoid Co., New York
Ruberoid Co., New York
FELTS—SOUND DEADENING
Armstrong Cork Co., Lancaster, Pa.
Barber Asphalt Corp., Barber, N.J.
Barrett Co., New York
Feltary—Sound Deadening
Certain-teed Products Corp., New York
Philip Carey Co., Lockland, Cincinnati, Ohio
Celotex Corp., Chicago
Certain-teed Products Corp., New York
Filitkote Co., New York
Ford Roofing Products Corp., New York
Filithcote Co., New York
Ford Roofing Products Corp., New York
Filithcote Co., New York
Ruberoid Co., New York
Ruberoid Co., New York
Roberoid Co., New York
Ford Roofing Products Corp., New York
Filithcote Co., New York
Ruberoid Co., Revy York
Ruberoid Co., Revy York
Ruberoid Co., Revy York
Rube

Ind.
Tennessee Coal, Iron & R. R. Co., Birmingham, Ala.
FENCE POSTS—
See Posts, Fence
FENCERS AND FENCE STRETCHERS
Mid-States Steel & Wire Co., Crawfordsville,
Ind.

Mid-States Steel & Wire Co., Clark
Ind.
Landon P. Smith, Inc., Irvington, N.J.
FIBRE BOARDS—
See Boards, Fibre
FIBRE TILE—
See Tile, Fibre
FILERS—SAW (Automatic Electric)
Foley Mfg. Co., Minneapolis, Minn.
—See adv. this page
(Continued on next page)

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Crane Henry Ohi

Majes L. J. Round Rybol

Farley Hanco Heatil Majes Ready Superi

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FILLERS—CEMENT
Barber Asphalt Corp., Barber, N.J.
L. Sonneborn Sons, Inc., New York
FILLERS—JOINT
Armstrong Cork Co., Lancaster, Pa.
Barber Asphalt Corp., Barber, N.J.
Calbar Paint & Varnish Co., Philadelphia, Pa.
Philip Carey Co., Lockland, Cincinnati, Ohio
Certain-teed Products Corp., New York
J. F. Laucks, Inc., Seattle, Wash.
Lowe Brothers Co., Dayton, Ohio
L. Sonneborn Sons, Inc., New York
U. S. Gypsum Co., Chicago
FILLERS—PAINT
Breinig Bros., Hoboken, N.J.
Calbar Paint & Varnish Co., Philadelphia, Pa.
Carr, Adams & Collier Co., Dubuque, Iowa
Lowe Brothers Co., Dayton, Ohio
Pecora Paint Co., Philadelphia, Pa.
Pittsburgh Plate Glass Co., Pittsburgh, Pa.
FILLERS—WOOD
Breinig Bros., Hoboken, N.J.
I. F. Laucks, Inc., Seattle, Wash.
Pittsburgh Plate Glass Co., Pittsburgh, Pa.
L. Sonneborn Sons, Inc., New York
FILTERS—WATER
Crane Co., Chicago
FINISH—FLOOR—
See Coverings, Floor; also Flooring
FINISH—WALL—
See Paints; Plaster; Varnishes;
Wax, Floor, etc.
FIRE DOORS—
See Doors, Fire
FIRE DOOR HARDWARE—
See Hardware, Fire door FIRE DOORS—
See Doors, Fire
FIRE DOOR HARDWARE—
See Hardware, Fire door
FIRE ESCAPES
Mesker Brothers, St. Louis, Mo.
FIREPLACES FIRE ESCAPES

Mesker Brothers, St. Louis, Mo.
FIREPLACES
Curtis Companies, Inc., Clinton, Iowa
Donley Brothers Co., Cleveland, Ohio
Edwards Mfg. Co., Cincinnati, Ohio
Heatilator Co., Syracuse, N.Y.
Majestic Co., Huntington, Ind.
Superior Fireplace Co., Los Angeles, Calif.
FIREPLACES—HEAT CIRCULATING
Donley Brothers Co., Cleveland, Ohio
Heatilator Co., Syracuse, N.Y.
Majestic Co., Huntington, Ind.
Superior Fireplace Co., Los Angeles, Calif.
FIREPLACES—OUTDOOR
Donley Brothers Co., Cleveland, Ohio
Hancock Iron Works, Pontiac, Mich.
Majestic Co., Huntington, Ind.
FIREPLACES—OUTDOOR
Donley Brothers Co., Cleveland, Ohio
Hancock Iron Works, Pontiac, Mich.
Majestic Co., Huntington, Ind.
FIREPLACE DAMPERS—
See Dampers, Fireplace
FIREPLACE TURNISHINGS—
See Furnishings, Fireplace
FIREPLACE HEATING UNITS—
See Heating Plants, Fireplace
FIREPLACE HEATING UNITS—
See Heating Plants, Fireplace
FIREPOOFING—METAL LATH
Johns-Manville, New York
Milcor Steel Co., Milwaukee, Wis.
U. S. Gypsum Co., Chicago
FITTINGS—CLOSET TANK
American Radiator & Standard Sanitary Corp.,
Pittsburgh, Pa.
Crane Co., Chicago
Eljer Co., Ford City, Pa.
Kohler Co., Kohler, Wis.
FITTINGS—CLOPER TUBE
American Brass Co., New York
FITTINGS—ELECTRIC CONDUIT
Aluminum Co. of America, Pittsburgh, Pa.
General Electric Co., Appl. & Merch. Dept.,
Bridgeport, Conn.
National Electric Products Corp., Pittsburgh, Pa. General Electric Co., Appl. & Merch. Dept., Bridgeport, Conn.
National Electric Products Corp., Pittsburgh, Pa.
FITTINGS—PIPE
Aluminum Co. of America, Pittsburgh, Pa.
American Radiator & Standard Sanitary Corp.,
Pittsburgh, Pa.
Crane Co., Chicago
Knape & Vogt Mfg. Co., Grand Rapids, Mich.
Milcor Steel Co., Milwaukee, Wis.
L. J. Mueller Furnace Co., Milwaukee, Wis.
National Lead Co., New York
FIXTURES—BATHROOM
American Radiator & Standard Sanitary Corp.,
Pittsburgh, Pa.
B & T Floor Co., Columbus, Ohio
Crane Co., Chicago
Eljer Co., Ford City, Pa.
Knape & Vogt Mfg. Co., Grand Rapids, Mich.
Kohler Co., Kohler, Wis.
F. H. Lawson Co., Cincinnati, Ohio
Marsh Wall Products Inc., Dover, Ohio
Miami Cabinet Division of the Philip Carey
Co., Middletown, Ohio
FIXTURES—LIGHTING
Knape & Vogt Mfg. Co., Grand Rapids, Mich.
F. H. Lawson Co., Cincinnati, Ohio
AFIXTURES—MIRROR
Crane Co., Chicago
Knape & Vogt Mfg. Co., Grand Rapids, Mich.
F. H. Lawson Co., Cincinnati, Ohio
FIXTURES—MIRROR
Crane Co., Chicago
Knape & Vogt Mfg. Co., Grand Rapids, Mich.
F. H. Lawson Co., Cincinnati, Ohio
Miami Cabinet Division of the Philip Carey
Co., Middletown, Ohio
FIXTURES—PLUMBING
American Radiator & Standard Sanitary Corp.,
Pittsburgh, Pa.
W. A. Case & Son Mfg. Co., Buffalo, N.Y.
Crane Co., Chicago
Eljer Co., Ford City, Pa.
Kohler Co., Kohler, Wis.
FIXTURES—STORE
Knape & Vogt Mfg. Co., Grand Rapids, Mich.
FIXTURES—WARDROBE
Knape & Vogt Mfg. Co., Grand Rapids, Mich.
Stanley Works, New Britain, Conn.

FLAGPOLES
Edwards Mfg. Co., Cincinnati, Ohio
Weyerhaeuser Sales Co., St. Paul, Minn.
FLASHINGS—COPPER
American Brass Co., New York
Sisalkraft Co., Chicago
FLASHINGS—WATERPROOF PAPER Sisalkraft Co., Chicago FLASHING BLOCKS AND FORMS FLASHING BLOCKS AND FORMS
Barrett Co., New York
FLOOR BRIDGING—
See Bridging, Floor
FLOOR COVERINGS—
See Coverings, Floor
FLOOR DRAINS—
See Drains, Floor
FLOOR EDGERS—
See Edgers, Floor
FLOOR FINISH—
See Varnishes; Wax, Floor; Fillers,
Wood, etc. See Varnishes; Wax, Floor; Fillers, Wood, etc.
FLOOR FURNACES—
See Furnaces, Floor
FLOOR GRINDERS—
See Grinders, Floor
FLOOR HARDENERS—
See Accelerators, Cement
FLOOR MASTIC—
See Cement, Flooring
FLOOR POLISHING MACHINES—
See Machines, Floor Polishing
FLOOR REGISTERS—
See Registers, Floor
FLOOR SANDERS—See Machines, Floor
Surfacing See Registers, Floor
FLOOR SANDERS—See Machines, Floor
Surfacing
FLOOR SCRAPERS—
See Scrapers, Floor and Wall; also
Machines, Floor Surfacing
FLOOR SURFACING MACHINES—
See Machines, Floor Surfacing
FLOOR TILE—
See Tile, Floor and Wall
FLOOR WAX—
See Wax, Floor
FLOOR PLATES—
See Pates, Floor
FLOOR PLATES—
See Pates, Floor
FLOORING—ASPHALT MASTIC
Armstrong Cork Co., Lancaster, Pa.
Barber Asphalt Corp., Barber, N.J.
Calbar Paint & Varnish Co., Philadelphia, Pa.
Philip Carey Co., Lockland, Cincinnati, Ohio
Flintkote Co., New York
Johns-Manville, New York
Johns-Manville Exchange Sawmills Sales Co., Kansas City.

Mo.

Frost Lumber Industries, Inc., Shreveport, La.

Maple Flooring Mfrs. Assn., Chicago

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Armstrong Cork Co., Texarkana, Tex.

FLOORING—LINOLEUM

Armstrong Cork Co., Lancaster, Pa.

Congoleum-Nairn Inc., Kearny, N.J.

FLOORING—SOFTWOOD (Pine, etc.)

Arkansas Soft Pine Bureau, Little Rock, Ark.

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Bradley Lbr. Co. of Arkansas, Warren, Ark.

E. L. Bruce Co., Memphis, Tenn.

Exchange Sawmills Sales Co., Kansas City,

Mo.

Florida Louisiana Red Cypress Co., Jackson-E. L. Bruce Co., Memphis, Tenn.

Exchange Sawmills Sales Co., Kansas City,

Mo.

Florida Louisiana Red Cypress Co., Jacksonville, Fla.

Frost Lumber Industries, Inc., Shreveport, La.

Harbor Plywood Corp., Hoquiam, Wash.

Southern Pine Lbr. Co., Texarkana, Tex.

Western Pine Assn., Portland, Ore.

—See page 224

Weyerhaeuser Sales Co., St. Paul, Minn.

FLOORING—STEEL.

American Rolling Mill Co., Middletown, Ohio

Gabriel Steel Co., Detroit, Mich.

FLOORING—TILE (Asbestos)

Tile-Tex Co., Chicago Heights, Ill.

FLOORING—TILE (Asphalt)

Armstrong Cork Co., Lancaster, Pa.

Philip Carey Co., Lockland, Cincinnati, Ohio

Celotex Corp., Chicago

Johns-Manville, New York

Masonite Corp., Chicago

FLOORING—TILE (Cork)

Armstrong Cork Co., Lancaster, Pa.

FLOORING—TILE (Rubber)

Armstrong Cork Co., Lancaster, Pa.

FLOORING—WOOD BLOCK

E. L. Bruce Co., Memphis, Tenn.

California Redwood Distributors, Ltd., Chicago

Maple Flooring Mfrs. Assn., Chicago cago
Maple Flooring Mfrs. Assn., Chicago
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FLUE LINING—
See Lining, Flue
FLUE PIPE—
See Pipe, Flue
FOLDING DOORS—
See Doors, Folding
FOLDING GATES—
See Gates, Folding See Gates, Folding
FOLDING PARTITIONS—
See Partitions, Rolling and Folding
FOOT BATHS—
See Baths, Foot
FORM LINERS
Armstrong Cork Co., Lancaster, Pa.
Celotex Corp., Chicago
FORMS AND MOLDS—CEMENT BRICK
Colorcrete Industries, Inc., Holland, Mich.

FORMS AND MOLDS—CHIMNEY
Colorcrete Industries, Inc., Holland, Mich.
FORMS AND MOLDS—CONCRETE
BLIOCK
Colorcrete Industries, Inc., Holland, Mich.
FORMS AND MOLDS—CONCRETE
BLIOCK
Colorcrete Industries, Inc., Holland, Mich.
FORMS AND MOLDS—CONCRETE
CONSTRUCTION
Colorcrete Industries, Inc., Holland, Mich.
Detroit Steel Products Co., Detroit, Mich.
Detroit Steel Products Co., Detroit, Mich.
Detroit Steel Products Co., Detroit, Mich.
Deuglas Fir Plywood Assn., Tacoma, Wash.
—See page 224
Harbor Plywood Corp., Hoquiam, Wash.
Jaeger Machine Co., Columbus, Ohio
Masonite Corp., Chicago
U. S. Plywood Corp., New York
FORMS AND MOLDS—CULVERT
Colorcrete Industries, Inc., Holland, Mich.
FORMS AND MOLDS—DRAIN TILE
Colorcrete Industries, Inc., Holland, Mich.
FORMS AND MOLDS—PENCE POST
Colorcrete Industries, Inc., Holland, Mich.
FORMS AND MOLDS—FENCE POST
Colorcrete Industries, Inc., Holland, Mich.
FORMS AND MOLDS—FENCE POST
Colorcrete Industries, Inc., Holland, Mich.
FORMS AND MOLDS—SEWER PIPE
Colorcrete Industries, Inc., Holland, Mich.
FORMS AND MOLDS—SEWER PIPE
Colorcrete Industries, Inc., Holland, Mich.
FORMS AND MOLDS—STEP
Colorcret FRAMES—BASEMENT WINDOW
(Steel)
Detroit Steel Products Co., Detroit, Mich.
Donley Brothers Co., Cleveland, Ohio
Gabriel Steel Co., Detroit, Mich.
Majestic Co., Huntington, Ind.
Mesker Brothers, St. Louis, Mo.
Milcor Steel Co., Milwaukee, Wis.
U. S. Gypsum Co., Chicago
Vento Steel Products Co., Muskegon, Mich
FRAMES—BASEMENT WINDOW
(Wood) (Wood)
Andersen Corp., Bayport, Minn.
California Redwood Distributors, Ltd., Chi-Andersen Corp., Bayport, Minn.
California Redwood Distributors, Ltd., Chicago
Carr, Adams & Collier Co., Dubuque, Iowa
Curtis Companies, Inc., Clinton, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Florida Louisiana Red Cypress Co., Jacksonville, Fla.
Frost Lumber Industries, Inc., Shreveport, La.
National Door Mfrs. Assn., Chicago
—See page 224
Pacific Mutual Door Co., Tacoma, Wash.
Weyerhaeuser Sales Co., St. Paul, Minn.
FRAMES—DOOR (Steel)
Coburn Trolley Track Co., Holyoke, Mass.
Detroit Steel Products Co., Detroit, Mich.
Donley Brothers Co., Cleveland, Ohio
Edwards Mfg. Co., Cincinnati, Ohio
Knape & Vogt Mfg. Co., Grand Rapids, Mich.
Mesker Brothers, St. Louis, Mo.,
Milcor Steel Co., Milwaukee, Wis.
Vento Steel Products Co., Muskegon, Mich.
FRAMES—DOOR (Wood)
Andersen Corp., Bayport, Minn.
Bradley Lbr. Co. of Arkansas, Warren, Ark.
California Redwood Distributors, Ltd., Chicago
Carr. Adams & Collier Co., Dubuque, Iowa Carr, Adams & Collier Co., Dubuque, Iowa Curtis Companies, Inc., Clinton, Iowa Exchange Sawmills Sales Co., Kansas City. Exchange Sawmills Sales Co., Kansas City.

Mo.
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Florida Louisiana Red Cypress Co., Jacksonville, Fla.
Frost Lumber Industries, Inc., Shreveport, La.
Huttig Mfg. Co., Muscatine, Iowa
National Door Mfrs. Assn., Chicago
—See page 224
Pacific Mutual Door Co., Tacoma, Wash.
Ponderosa Pine Woodwork, Chicago
—See page 224
Weyerhaeuser Sales Co., St. Paul, Minn.
FRAMES—SASH (Steel)
Detroit Steel Products Co., Detroit, Mich.
Edwards Mfg. Co., Cincinnati, Ohio
Mesker Brothers, St. Louis, Mo.
Milcor Steel Co., Milwaukee, Wis.
Vento Steel Products Co., Muskegon, Mich.
FRAMES—SASH (Wood)
Andersen Corp., Bayport, Minn.
Bradley Lbr. Co. of Arkansas, Warren, Ark.
California Redwood Distributors, Ltd., Chicago
Carr. Adams & Collier Co., Dubuque, Iowa California Redwood Distributors, Ltd., Carcago
Carr. Adams & Collier Co., Dubuque, Iowa
Curtis Companies, Inc., Clinton, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Florida Louisiana Red Cypress Co., Jacksonville, Ffa.
Frost Lumber Industries, Inc., Shreveport, La.
Huttig Mfg. Co., Muscatine, Iowa
National Door Mfrs. Assn., Chicago
—See page 224
Pacific Mutual Door Co., Tacoma, Wash.
Perfection Oak Flooring Co., Shreveport, La.
Ponderosa Pine Woodwork, Chicago
—See page 224
Weyerhaeuser Sales Co., St. Paul, Minn.
FRAMES—WINDOW—
See Casings, Window; also Frames,
Sash

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Mich. ich.

Ark. wa City. cksonrt. La

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GAS RANGES— See Ranges, Gas

FRONTS—STORE
Kawneer Co., Niles, Mich.
Libbey-Owens-Ford Glass Co., Toledo, Ohio
Pittsburgh Plate Glass Co., Pittsburgh, Pa.
FURNACES—FLOOR (Gas Fired)
Coleman Lamp & Stove Co., Wichita, Kans.
Hotstream Heater Co., Cleveland, Ohio
H. C. Little Burner Co., San Rafael, Calif.
L. J. Mueller Furnace Co., Milwaukee, Wis.
Pacific Gas Radiator Co., Huntington Park,
Calif.
Calif. Pacific Gas Radiator Co., Huntington Park, Calif. Payne Furnace & Supply Co., Beverly Hills, Calif.

FURNACES—FLOOR (Oil-Fired)

Coleman Lamp & Stove Co., Wichita, Kans.

FURNACES—GAS-FIRED

Airtemp Division, Dayton, Ohio

American Radiator & Standard Sanitary Corp.,

Pittsburgh, Pa.

Crane Co., Chicago

General Electric Co., Air Cond. & Comm.

Refrig. Dept., Bloomfield, N.J.

Henry Furnace & Foundry Co., Cleveland,

Ohio Ohio
Majestic Co., Huntington, Ind.
L. J. Mueller Furnace Co., Milwaukee, Wis.
Norge Heating & Conditioning Division, Detroit, Mich.
Pacific Gas Radiator Co., Huntington Park, Calif.
Payne Furnace & Supply Co., Beverly Hills,
Calif. Calif.
Round Oak Co., Dowagiac, Mich.
Rybolt Heater Co., Ashland, Ohio
Surface Combustion Corp., Toledo, Ohio
FURNACES—OIL-FIRED
Airtemp Division, Dayton, Ohio
American Radiaco & Standard Sanitary Corp.,
Ditteburgh Pa American Radiator & Standard Camerican, Pittsburgh, Pa.
Calesco Corp., Lynn, Mass.
Crane Co., Chicago
General Electric Co., Air Cond. & Comm.
Refrig. Dept., Bloomfield, N.J.
Henry Furnace & Foundry Co., Cleveland.
Obio Ohio
Iron Fireman Mfg. Co., Portland, Ore.
Kohler Co., Kohler, Wis.
H. C. Little Burner Co., San Rafael, Calif.
Lochinvar Division, Dearborn, Mich.
Majestic Co., Huntington, Ind.
L. J. Mueller Furnace Co., Milwaukee, Wis.
Norge Heating & Conditioning Division, Detroit. Mich. Norge Heating & Conditioning Division, Lordroit, Mich.
Round Oak Co., Dowagiac, Mich.
Rybolt Heater Co., Ashland, Ohio
FURNACES—PIPELESS—
See Heating Plants, Pipeless Fur-See Heating Plants, Pipeless Furnaces
FURNACES—STOKER-FIRED
American Radiator & Standard Sanitary Corp.,
Pittsburgh, Pa.
Crane Co., Chicago
Henry Furnace & Foundry Co., Cleveland,
Ohio
Majestic Co., Huntington, Ind.
L. J. Mueller, Furnace Co., Milwaukee, Wis.
Round Oak Co., Dowagiac, Mich,
Rybolt Heater Co., Ashland, Ohio
FURNACES—WARM AIR—
See Heating Plants, Warm Air Furnaces See Heating Plants, Warm Air Furnaces
FURNACE FANS—
See Fans, Furnace
FURNACE PIPE—
See Pipe, Furnace
FURNACE PIPE—
See Regulators, Furnace
FURNISHINGS—FIREPLACE
Donley Brothers Co., Cleveland, Ohio
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Hancock Iron Works, Pontiae, Mich.
Heatilator Co., Syracuse, N.Y.
Majestic Co., Huntington, Ind.
Readybuilt Products Co., Baltimore, Md.
Superior Fireplace Co., Los Angeles, Calif.
Wooster Products, Inc., Wooster, Ohio
FURNITURE—DRAFTING ROOM
Warren-Knight Co., Philadelphia, Pa.
David White Co., Milwaukee, Wis.
FURRING—WALL
Frost Lumber Industries, Inc., Shreveport, La.
Milcor Steel Co., Milwaukee, Wis.
Weyerhaeuser Sales Co., St. Paul, Minn.
GALVANIZED NAILS—
See Nails
GALVANIZED ROOFING—
See Roofing
GARAGE DOORS— See Nails
GALVANIZED ROOFING—
See Roofing
GARAGE DOORS—
See DOORS, Garage
GARAGE DOOR BOLTS—
See Bolts, Garage Door
GARAGE DOOR HANGERS—
See Hardware, Garage Door
GARAGE DOOR HOLDERS—
See Holders, Garage Door
GARAGE DOOR OPENERS—
See Openers, Garage Door
GARAGE WINDOWS—
See Windows, Garage
GARBAGE BURNERS—
See Incinerators
GARMENT HANGERS—
See Fixtures, Wardrobe
GAS—BOTTLED
Pyrofax Gas Division, Carbide & Carbon
Chemicals Corp., New York
GAS BURNERS—
See Burners, Gas; Furnaces, GasFired; and Heating Plants, GasFired
GAS LOGS—
See Furnishings, Fireplace
GAS RANGES—
See Ranges, Gas
See Ranges, Gas

GATES—ELEVATOR
Cincinnati Iron Fence Co., Cincinnati, Ohio
GATES—FOLDING
Cincinnati Iron Fence Co., Cincinnati, Ohio
GATES—IRON
Cincinnati Iron Fence Co., Cincinnati, Ohio
Donley Brothers Co., Cleveland, Ohio
Tennessee Coal, Iron & R.R. Co., Birmingham,
Ala. Ala.
GATES—WOVEN WIRE
Mid-States Steel & Wire Co., Crawfordsville, Mid-States Steel & Wire Co., Crawfordsville, Ind.

GATE VALVES—
See Valves, Gate
GAUGES—BUTT
Stanley Tools, New Britain, Conn.
Wagner Mfg. Co., Cedar Falls, Iowa
GAUGES—MORTISE
Stanley Tools, New Britain, Conn.
GAUGES—STEAM AND HOT WATER
Crane Co., Chicago
GENERATORS—ELECTRIC (Portable)
Homelite Corp., Port Chester, N.Y.
GLASS BLOCKS
Owens-Illinois Glass Co., Toledo, Ohio
Pittsburgh Plate Glass Co., Pittsburgh, Pa.
Libbey-Brane G. Glass Co., Pittsburgh, Pa.
GLASS—PRISM
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Pittsburgh Plate Glass Co., Pittsburgh, Pa.
GLASS—STRUCTURAL
Libbey-Owens-Ford Glass Co., Pittsburgh, Pa.
GLASS—ULTRA VIOLET RAY
American Window Glass Co., Pittsburgh, Pa.
GLASS—ULTRA VIOLET RAY
American Window Glass Co., Pittsburgh, Pa.
GLASS—UNBREAKABLE
American Window Glass Co., Pittsburgh, Pa.
GLASS—WINDOW
American Window Glass Co., Pittsburgh, Pa.
GLASS—WIRE
Pittsburgh Plate Glass Co., Pittsburgh, Pa.
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Libbey-Owens-Ford Glass Co., Pittsburgh, Pa.
GLASS—WIRE
Pittsburgh Plate Glass Co., Pittsburgh, Pa.
GLASING COMPOUNDS—
See Compounds, Glazing
G. F. Lucks, Inc., Seattle, Wash.
GLASS—WIRE
Onley Brothers Co., Cleveland, Ohio
Pittsburgh Plate Glass Co., Forden, Ohio
Pittsburgh Plate Glass Co., Cincinnati, Ohio
Compounds, Granters—Area
Cincinnati Iron Fenee Co., Cincinnati, Ohio
Compounds, Granters—Area
Cincinnati Iron Fenee Co., Cincinnati, Ohio
Compounds Froducts, Inc., Wooster, Ohio
GRATES—AREA
Cincinnati Iron Fenee Co., Cincinnati, Ohio
Compounds Mfg. Co., Cincinnati, Oh Conn.

Walker-Turner Co., Plainfield, N.J.

Wodack Electric Tool Corp., Chicago
GRINDERS—FLOOR

American Floor Surfacing Machine Co., Toledo, Ohio
Mail Tool Co., Chicago
Walker-Turner Co., Plainfield, N.J.
GRINDERS—PORTABLE ELECTRIC
R. L. Carter Division, New Britain, Conn.
Stanley Electric Tool Division, New Britain,
Conn.
GRINDERS—SAW GRINDERS—SAW Foley Mfg. Co., Minneapolis, Minn.

GRINDERS—TOOL
Black & Decker Mfg. Co., Towson, Md.
Foley Mfg. Co., Minneapolis, Minn.
Mall Tool Co., Chicago
Skilsaw, Inc., Chicago
Skilsaw, Inc., Chicago
Stanley Electric Tool Division, New Britain.
Conn.
Walker-Turner Co., Plainfield, N.J.
J. D. Wallace & Co., Chicago
GROOVING SAWS—
See Saws, Grooving
GROUTERS—CEMENT
Calbar Paint & Varnish Co., Philadelphia, Pa.
Mall Tool Co., Chicago
GROUT MIXERS—
See Mixers, Grout
GUARDS—DOOR
Cincinnati Iron Fence Co., Cincinnati, Ohio
F. D. Kees Mfg. Co., Beatrice, Nebr.
Stanley Works, New Britain, Conn.
U. S. Gypsum Co., Chicago
Wagner Mfg. Co., Cedar Falls, Iowa
Wooster Products, Inc., Wooster Ohio
GUARDS—JAMB AND CORNER
Donley Brothers Co., Cleveland, Ohio
GUARDS—ADIATOR—
See Enclosures, Radiator
GUARDS—SAW
American Saw Mill Machinery Co., Hackettstown, N.J.
Consolidated Machinery & Supply Co., Los
Angeles, Calif.
De Walt Products Corp., Lancaster, Pa.
Master Woodworker Mfg. Co., Detroit, Mich.
GUARDS—SNOW
Edwards Mfg. Co., Chicannati, Ohio
Milcor Steel Co., Milwaukee, Wis.
GUARDS—WHEEL
American Saw Mill Machinery Co., Hackettstown, N.J.
Donley Brothers Co., Cleveland, Ohio
Milcor Steel Co., Milwaukee, Wis.
GUARDS—WHEEL
American Saw Mill Machinery Co., Hackettstown, N.J.
Donley Brothers Co., Cleveland, Ohio
Mijeor Steel Co., Milwaukee, Wis.
GUARDS—WHOOW
Cincinnati Iron Fence Co., Cincinnati, Ohio
Edwards Mfg. Co., Cincinnati, Ohio
Mijeor Steel Co., Milwaukee, Wis.
Wooster Products, Inc., Wooster, Ohio
GUARDS—WINDOW
Cincinnati Iron Fence Co., Cincinnati, Ohio
Edwards Mfg. Co., Cincinnati, Ohio
Mijeor Steel Co., Milwaukee, Wis.

GUARDS—WINDOW
Cincinnati Iron Fence Co., Cincinnati, Ohio
Edwards Mfg. Co., Chicago
Vento Steel Co., Milwaukee, Wis.

GUARDS—WINDOW
Condinati Iron Fence Co., Cincinnati, Ohio
Edwards Mfg. Co., Chicago
Vento Steel Products Co., Muskegon, Mich.
GUIDES—LETTERING
Warren-Knight Co., Philadelphia, Pa.
GUTTERS—WOOD
California Redwood Distributors, Ltd., Chicago
Weyerhaeuser Sales Co., St. Paul, Minn.
HAMMERS—CARPENTERS' California Redwood Distributors, Ltd., Chicago
Weyerhaeuser Sales Co., St. Paul, Minn.
HAMMERS—CARPENTERS'
Stanley Tools, New Britain, Conn.
HAMMERS—PORTABLE ELECTRIC
Black & Decker Mfg. Co., Towson, Md.
Mall Tool Co., Chicago
Stanley Electric Tool Division, New Britain,
Conn.
Synton Co., Hower City, Pa Conn.
Syntron Co., Homer City, Pa.
Wodack Electric Tool Corp., Chicago
HANGERS—BATH TUB
Wm. B. Lucke, Inc., Wilmette, Ill.
HANGERS, DOOR—
See Hardware, Door
HANGERS—EAVES TROUGH
Edwards Mfg. Co., Cincinnati, Ohio
Mid-States Steel & Wire Co., Crawfordsville,
Ind. HANGERS—EAVES IROUGH
Edwards Mfg. Co., Cincinnati, Ohio
Mid-States Steel & Wire Co., Crawfordsville,
Ind.
Milcor Steel Co., Milwaukee, Wis.
HANGERS—GARMENT—
See Fixtures, Wardrobe
HANGERS—PIPE
American Radiator & Standard Sanitary Corp.
Pittsburgh, Pa.
Crane Co., Chicago
Knape & Vogt Mfg. Co., Grand Rapida, Mich.
Milcor Steel Co., Milwaukee, Wis.
HANGERS—SCREEN
Curtis Companies, Inc., Clinton, Iowa
W. J. Dennis & Co., Chicago
Frantz Mfg. Co., Sterling, Ill.
F. D. Kees Mfg. Co., Beatrice, Nebr.
Knape & Vogt Mfg. Co., Grand Rapids, Mich.
McKinney Mfg. Co., Pittsburgh, Pa.
National Mfg. Co., Sterling, Ill.
Stanley Works, New Britain, Conn.
HANGERS—SLIDING PARTITION
Allith-Prouty, Inc., Danville, Ill.
Coburn Trolley Track Co., Holyoke, Mass.
Wagner Mfg. Co., Cedar Falls, Iowa
HARDBOARD—
See Boards, Insulating and Wall
HARDENERS—CEMENT, FLOOR, etc.—
See Accelerators, Cement
HARDWARE—ACCORDION DOOR
Allith-Prouty, Inc, Danville, Ill.
Coburn Trolley Track Co., Holyoke, Mass.
McKinney Mfg. Co., Sterling, Ill.
Stanley Works, New Britain, Conn.
Wagner Mfg. Co., Cedar Falls, Iowa
HARDWARE—ARPORT DOOR
Allith-Prouty, Inc., Danville, Ill.
Coburn Trolley Track Co., Holyoke, Mass.
McKinney Mfg. Co., Sterling, Ill.
Stanley Works, New Britain, Conn.
Wagner Mfg. Co., Sterling, Ill.
McKinney Mfg. Co., Sterling, Ill.
Churis Companies, Inc., Clinton, Iowa
Frantz Mfg. Co., Sterling, Ill.
Stanley Works, New Britain, Conn.
Wagner Mfg. Co., Sterling, Ill.
Stanley Works, New Britain, Conn.
Wagner Mfg. Co., Cedar Falls, Iowa
HARDWARE—CABINET
American Cabinet Hardware Corp., Rockford.
Ill.
Cuttis Companies, Inc., Clinton, Iowa
Frantz Mfg. Co., Sterling, Ill. Ill.
Curtis Companies, Inc., Clinton, Iowa
Frantz Mfg. Co., Sterling, Ill.
H. B. Ives Co., New Haven, Conn.
(Continued on next page)

Knape & Vogt Mfg. Co., Grand Rapids, Mich. McKinney Mfg. Co., Pittsburgh, Pa. National Brass Co., Grand Rapids, Mich. National Mfg. Co., Sterling, Ill.
Stanley Works, New Britain, Conn.
HARDWARE—CASEMENT WINDOW Frantz Mfg. Co., Sterling, Ill.
H. B. Ives Co., New Haven, Conn.
McKinney Mfg. Co., Pittsburgh, Pa.
Mesker Brothers, St. Louis, Mo.
National Brass Co., Grand Rapids, Mich. National Mfg. Co., Sterling, Ill.
Stanley Works, New Britain, Conn.
HARDWARE—COLONIAL
McKinney Mfg. Co., Pittsburgh, Pa.
Stanley Works, New Britain, Conn.
HARDWARE—DOOR
Allith-Prouty, Inc., Danville, Ill.
American Cabinet Hardware Corp., Rockford, Ill.
Coburn Trolley Track Co., Holyoke, Mass.

American Cabinet Hardware Corp., Rockford, Ill.
Coburn Trolley Track Co., Holyoke, Mass.
Frants Mfg. Co., Sterling, Ill.
H. B. Ives Co., New Haven, Conn.
Knape & Vogt Mfg. Co., Grand Rapids, Mich.
McKinney Mfg. Co., Pittsburgh, Pa.
National Brass Co., Grand Rapids, Mich.
National Mfg. Co., Sterling, Ill.
Stanley Works, New Britain, Conn.
Wagner Mfg. Co., Cedar Falls, Iowa
HARDWARE—ELEVATOR DOOR
Coburn Trolley Track Co., Holyoke, Mass.
Wagner Mfg. Co., Cedar Falls, Iowa
HARDWARE—FIREDOOR
Allith-Prouty, Inc., Danville, Ill.
Coburn Trolley Track Co., Holyoke, Mass.
McKinney Mfg. Co., Pittsburgh, Pa.
Wagner Mfg. Co., Cedar Falls, Iowa
HARDWARE—GARAGE DOOR
Allith-Prouty, Inc., Danville, Ill.
Coburn Trolley Track Co., Holyoke, Mass.
Frantz Mfg. Co., Sterling, Ill.
Kohner Mfg. Co., Sterling, Ill.
Kinnear Mfg. Co., Columbus, Ohio
Majestic Co., Huntington, Ind.
McKinney Mfg. Co., Pittsburgh, Pa.
Modern Steel Products Co.—See adv. this
page
National Brass Co., Grand Rapids, Mich.

Modern Steel Products Co.—See adv. this page
National Brass Co., Grand Rapids, Mich.
National Mfg. Co., Sterling, Ill.
Overhead Door Corp., Hartford City, Ind.
Stanley Works, New Britain, Conn.
Wagner Mfg. Co., Cedar Falls, Iowa
HARDWARE—LAVATORY
American Radiator & Standard Sanitary Corp.,
Pittsburgh, Pa.

American Radiator & Standard Sanitary Corp.,
Pittsburgh, Pa.
Crane Co., Chicago
Eljer Co., Ford City, Pa.
H. B. Ives Co., New Haven, Conn.
HARDWARE—SASH—
See also Balances, Sash; Holders,
Sash; Operators, Sash
American Cabinet Hardware Corp., Rockford,
Ill.

See also Balances, Sash; Holders, Sash; Operators, Sash
American Cabinet Hardware Corp., Rockford. Ill.
Caldwell Mfg. Co., Rochester, N.Y.
Curtis Companies, Inc., Clinton, Iowa Frantz Mfg. Co., Sterling, Ill.
H. B. Ives Co., New Haven, Conn.
F. D. Kees Mfg. Co., Beatrice, Nebr.
Knape & Vogt Mfg. Co., Grand Rapids, Mich. McKinney Mfg. Co., Pittsburgh, Pa.
National Mfg. Co., Sterling, Ill.
Stanley Works, New Britain, Conn.
HARDWARE—SCREEN
W. J. Dennis & Co., Chicago
Frantz Mfg. Co., Sterling; Ill.
F. D. Kees Mfg. Co., Beatrice, Nebr.
Knape & Vogt Mfg. Co., Grand Rapids, Mich. McKinney Mfg. Co., Pittsburgh, Pa.
Stanley Works, New Britain, Conn.
Wagner Mfg. Co., Cedar Falls, Iowa
HARDWARE—SCREEN DOOR AND
STORM DOOR
W. J. Dennis & Co., Chicago
Frantz Mfg. Co., Sterling, Ill.
H. B. Ives Co., New Haven, Conn.
F. D. Kees Mfg. Co., Beatrice, Nebr.
Knape & Vogt Mfg. Co., Grand Rapids, Mich. McKinney Mfg. Co., Pittsburgh, Pa.
National Brass Co., Grand Rapids, Mich. McKinney Mfg. Co., Sterling, Ill.
Stanley Works, New Britain, Conn.
Wagner Mfg. Co., Cedar Falls, Iowa
HARDWARE—SCUTTLE
Stanley Works, New Britain, Conn.
HARDWARE—SCUTTLE
Stanley Works, New Britain, Conn.
HARDWARE—STORM SASH
Curtis Companies, Inc., Clinton, Iowa
Frantz Mfg. Co., Sterling, Ill.
F. D. Kees Mfg. Co., Grand Rapids, Mich. McKinney Mfg. Co., Sterling, Ill.
Stanley Works, New Britain, Conn.
HARDWARE—STORM SASH
Curtis Companies, Inc., Clinton, Iowa
Frantz Mfg. Co., Sterling, Ill.
Stanley Works, New Britain, Conn.
HARDWARE—TRANSOM
H. B. Ives Co., New Haven, Conn.
McKinney Mfg. Co., Pittsburgh, Pa.
National Mfg. Co., Sterling, Ill.
Stanley Works, New Britain, Conn.
HEADS—DADO
American Saw Mill Machinery Co., Hacketts-town, N.J.
Delta Mfg. Co., Chicago
Dewalt Products Corp., Lancaster, Pa.
Mall Tool Co., Chicago
Dewalt Products Corp., Lancaster, Pa.
Mall Tool Co., Chicago
Dewalt Products Corp., Lancaster, Pa.
Mall Tool Co., Chicago
Dewalt Products Corp., Lancaster, Pa.
Mall Tool Co., Chicago
Dewalt Products Corp., Lancaster, Pa.
Mall Tool Co., Chicago
Dew

DeWalt Products Corp., Lancaster, Pa.
Master Woodworker Mfg. Co., Detroit, Mich.
Walker-Turner Co., Plainfield, N.J.

HEAT CONTROLS—
See Regulators, Furnace; and Thermostats
HEATERS—BLAST
Modine Mfg. Co., Racine, Wis.
HEATERS—CABINET
Locke Stove Co., Kansas City, Mo.
Majestic Co., Huntington, Ind.
Modine Mfg. Co., Racine, Wis.
Pacific Gas Radiator Co., Huntington Park, Calif.

Pacific Gas Radiator Uo., Assumed Calif.
Payne Furnace & Supply Co., Beverly Hills, Calif.
Calif. ATERS—ELECTRIC Calif.

HEATERS—ELECTRIC
Frank Adam Electric Co., St. Louis, Mo.
Shepler Mfg. Co., Pittsburgh, Pa.
Thermador Electrical Mfg. Co., Los Angeles,

Calif.
HEATERS—GARAGE
Locke Stove Co., Kansas City, Mo.
Modine Mfg. Co., Racine, Wis.
Pacific Gas Radiator Co., Huntington Park,

Calif.
Shepler Mfg. Co., Pittsburgh, Pa.
Surface Combustion Corp., Toledo, Ohio
HEATERS—GAS
American Radiator & Standard Sanitary Corp., Pittsbugh, Pa. Crane Co., Chicago Hotstream Heater Co., Cleveland, Ohio Pacific Gas Radiator Co., Huntington Park,

Pacific Gas Radiator Co., Huntington Law, Calif.
Payne Furnace & Supply Co., Beverly Hill, Calif.
Shepler Mfg. Co., Pittsburgh, Pa.
Superior Fireplace Co., Los Angeles, Calif.
Surface Combustion Corp., Toledo, Ohio

"MODERN"

OVERHEAD ACTING

GARAGE DOOR HARDWARE

ONLY 2" HEAD CLEARANCE Write for Folders and Prices

The Modern Steel Products Co.

Columbus, Ohio

HEATERS—ROOM Frank Adam Electric Co., St. Louis, Mo. American Radiator & Standard Sanitary Corp., American Radiator & Standard Sanitary Corp.,
Pittsburgh, Pa.
Coleman Lamp & Stove Co., Wichita, Kans.
Edwards Mfg. Co., Cincinnati, Ohio
General Electric Co., Air Cond. & Comm.
Refrig. Dept., Bloomfield, N.J.
Henry Furnace & Foundry Co., Cleveland,
Ohio

Ohio
Hotstream Heater Co., Cleveland, Ohio
Locke Stove Co., Kansas City, Mo.
Modine Mfg. Co., Racine, Wis.
Norge Heating & Conditioning Division, Detroit, Mich.
Pacific Gas Radiator Co., Huntington Park,
Calif.
Payne Furnace & Supply Co., Beverly Hills,
Calif.
Round Oak Co. Downsiae Mich.

Calif.
Round Oak Co., Dowagiac, Mich.
Surface Combustion Corp., Toledo, Ohio
Thermador Electrical Mfg. Co., Los Angeles,
Calif.

Calif.

HEATERS—SCHOOLROOM

American Radiator & Standard Sanitary Corp.,
Pittsburgh, Pa.
Crane Co., Chicago

Henry Furnace & Foundry Co., Cleveland,
Ohio

Henry Furnace & Foundry Co., Cleveland, Ohio
Locke Stove Co., Kansas City, Mo.
Majestic Co., Huntington, Ind.
L. J. Mueller Furnace Co., Milwaukee, Wis.
Norge Heating & Conditioning Division, Detroit, Mich.
Pacific Gas Radiator Co., Huntington Park, Calif.
Round Oak Co., Dowagiac, Mich.
Surface Combustion Corp., Toledo, Ohio
HEATERS—TANK
American Radiator & Standard Sanitary Corp.,
Pittsburgh, Pa.
Crane Co., Chicago
Hotstream Heater Co., Cleveland, Ohio
L. J. Mueller Furnace Co., Milwaukee, Wis.
Pacific Gas Radiator Co., Huntington Park,
Calif.

L. J. Mueller Furnace Co., Milwaukee, Wis. Pacific Gas Radiator Co., Huntington Park. Calif.
HEATERS—UNIT
Crane Co., Chicago
Modine Mfg. Co., Racine, Wis.
Surface Combustion Corp., Toledo, Ohio
HEATERS—WATER
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
Coleman Lamp & Stove Co., Wichita, Kans.
Crane Co., Chicago
Edison General Electric Appliance Co., Chicago
General Electric Co., Air Cond. & Comm.
Refrig. Dept., Bloomfield, N.J.
Hotstream Heater Co., Cleveland, Ohio
H. C. Little Burner Co., San Rafael, Calif.
Lochinvar Division, Dearborn, Mich.
Norge Heating & Conditioning Division, Detroit, Mich.
Pacific Gas Radiator Co., Huntington Park,
Calif.
Round Oak Co., Dowagiac, Mich.
HEATERS—WATER (Automatic)
American Radiator & Standard Sanitary Corp.,
Pittsburgh, Pa.
Crane Co., Chicago

Edison General Electric Appliance Co., Chicago General Electric Co., Air Cond. & Comm. Refrig. Dept., Bloomfield, N.J. Hotstream Heater Co., Cleveland, Ohio H. C. Little Burner Co., San Rafael, Calif. Norge Heating & Conditioning Division, Detroit, Mich.

Pacific Gas Radiator Co., Huntington Park, Calif.

HEATERS—WATER (Automatic)—
Remote Control for
Savutime Devices, Inc., Rochester, N.Y. HEATING PLANT BOILERS—
See Boilers, Heating Plant HEATING PLANTS—FIREPLACE Edwards Mfg. Co., Cincinnati, Ohio Heatilator Co., Syracuse, N.Y.

HEATING PLANTS—HOT WATER Airtemp Division, Dayton, Ohio American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
Calesco Corp., Lynn, Mass.
Crane Co., Chicago Kohler Co., Kohler, Wis.
H. C. Little Burner Co., San Rafael, Calif. Modine Mfg. Co., Racine, Wis.
L. J. Mueller Furnace Co., Milwaukee, Wis. Norge Heating & Conditioning Division, Detroit, Mich.

HEATING PLANTS—PIPELESS FUR. NACES
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.

American Radiator & Standard Sanitary Corp., Pittsburgh, Pa., Crane Co., Chicago Henry Furnace & Foundry Co., Cleveland, Ohio Majestic Co., Huntington, Ind. L. J. Mueller Furnace Co., Milwaukee, Wis. Norge Heating & Conditioning Division, Detroit, Mich.
Pacific Gas Radiator Co., Huntington Park, Calif.
Payne Furnace & Supply Co., Beverly Hills, Calif.
Round Oak Co., Dowariac, Mich.

Payne Furnace & Supply Co., Beverly Hills, Calif.
Round Oak Co., Dowagiac, Mich.
Rybolt Heater Co., Ashland, Ohio
HEATING PLANTS—STEAM
Airtemp Division, Dayton, Ohio
American Radiator & Standard Sanitary Corp.
Pittsburgh, Pa.
Crane Co., Chicago
Modine Mfg. Co., Racine, Wis.
L. J. Mueller Furnace Co., Milwaukee, Wis.
HEATING PLANTS—VAPOR
Airtemp Division, Dayton, Ohio
American Radiator & Standard Sanitary Corp.
Pittsburgh, Pa.
Crane Co., Chicago
Modine Mfg. Co., Racine, Wis.
L. J. Mueller Furnace Co., Milwaukee, Wis.
HEATING PLANTS—WARM AIR FURNACES
Airtemp Division, Dayton, Ohio
American Radiator & Standard Sanitary Corp.
Pittsburgh, Pa.
Crane Co. Chicago

American Radiator & Standard Sanitary Corp., Pittsburgh, Pa. Crane Co., Chicago Edwards Mfg. Co., Cincinnati, Ohio General Electric Co., Air Cond. & Comm. Refrig. Dept., Bloomfield, N.J. Henry Furnace & Foundry Co., Cleveland. Ohio

Ohio
Iron Fireman Mfg. Co., Portland, Ore.
H. C. Little Burner Co., San Rafael, Calif.
Lochinvar Division, Dearborn, Mich.
Majestic Co., Huntington, Ind.
L. J. Mueller Furnace Co., Milwaukee. Wis.
Norge Heating & Conditioning Division, Detroit, Mich.
Pacific Gas Radiator Co., Huntington Park,
Calif.

Calif.
Payne Furnace & Supply Co., Beverly Hills.
Calif.

Calif.
Round Oak Co., Dowagiac, Mich.
Ryboit Heater Co., Ashland, Ohio
Superior Fireplace Co., Los Angeles. Calif.
HINGES—BLIND AND SHUTTER
McKinney Mfg. Co., Pittsburgh, Pa.
Knape & Vogt Mfg. Co., Grand Rapids, Mich.
Stanley Works, New Britain, Conn.
HINGES—BUTT
American Cabinet Hardware Corp., Rockford.
III.

HINGES—BUTT

American Cabinet Hardware Corp., Rockford.

Ill.
Frantz Mfg. Co., Sterling, Ill.
Fr. D. Kees Mfg. Co., Beatrice, Nebr.
Knape & Vogt Mfg. Co., Grand Rapids, Mich.
McKinney Mfg. Co., Sterling, Ill.
Stanley Works, New Britain, Conn.
Wagner Mfg. Co., Sterling, Ill.
Stanley Works, New Britain, Ill.
Stanley Works, New Britain, Ill.
National Mfg. Co., Sterling, Ill.
Stanley Works, New Britain, Conn.
HINGES—GATE
Coburn Trolley Track Co., Holyoke, Mass.
Frantz Mfg. Co., Sterling, Ill.
McKinney Mfg. Co., Sterling, Ill.
Stanley Work, New Britain, Conn.
Wagner Mfg. Co., Sterling, Ill.
Stanley Work, New Britain, Conn.
Wagner Mfg. Co., Sterling, Ill.
F. D. Kees Mfg. Co., Gedar Falls, Iowa
HINGES—SCREEN DOOR
Frantz Mfg. Co., Sterling, Ill.
F. D. Kees Mfg. Co., Grand Rapids, Mich.
McKinney Mfg. Co., Sterling, Ill.
Stanley Works, New Britain, Conn.
Wagner Mfg. Co., Cedar Falls, Iowa
HINGES—SPRING
Frantz Mfg. Co., Sterling, Ill.
Stanley Works, New Britain, Conn.
Wagner Mfg. Co., Sterling, Ill.
Knape & Vogt Mfg. Co., Grand Rapids, Mich.
National Mfg. Co., Sterling, Ill.
Knape & Vogt Mfg. Co., Grand Rapids, Mich.
National Mfg. Co., Sterling, Ill.
Stanley Works, New Britain, Conn.
Wagner Mfg. Co., Sterling, Ill.
Stanley Works, New Britain, Conn.
Wagner Mfg. Co., Sterling, Ill.
Stanley Works, New Britain, Conn.
Wagner Mfg. Co., Cedar Falls, Iowa

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American Builder, April 1941. HINGES—STRAP
Coburn Trolley Track Co., Holyoke, Mass.
Frantz Mfg. Co., Sterling, Ill.
Knape & Vogt Mfg. Co., Grand Rapids, Mich.
McKinney Mfg. Co., Pittsburgh, Pa.
National Mfg. Co., Sterling, Ill.
Stanley Works, New Britain, Conn.
Wagner Mfg. Co., Cedar Falls, Iowa
HINGES—SURFACE
Allith-Prouty, Inc., Danville, Ill.
American Cabinet Hardware Corp., Rockford, HINGES—SURFACE
Allith-Prouty, Inc., Danville, Ill.
American Cabinet Hardware Corp., Rockford, Ill.
Frantz Mfg. Co., Sterling, Ill.
Knape & Vogt Mfg. Co., Grand Rapids, Mich. McKinney Mfg. Co., Sterling, Ill.
Stanley Works, New Britain, Conn.
Wagner Mfg. Co., Cedar Falls, Iowa
HOISTS—ASH AND FUEL
Sedgwick Machine Works, New York
HOISTS—BUILDING MATERIAL
American Cement Machinery Co., Keckuk, Iowa
American Saw Mill Machinery Co., Hackettstown, N.J.
Construction Machinery Co., Waterloo, Iowa
Jaeger Machine Works, New York
Stel Scaffolding Co., Evansville, Ind.
HOISTS—CHAIN
Sedgwick Machine Works, New York
HOISTS—ELECTRIC
Construction Machinery Co., Waterloo, Iowa
Jaeger Machine Co., Columbus, Ohio
Sedgwick Machine Works, New York
HOISTS—FRICTION
Construction Machinery Co., Waterloo, Iowa
Jaeger Machine Co., Columbus, Ohio
Sedgwick Machine Works, New York
HOISTS—GASOLINE
American Cement Machine Co., Keckuk. Iowa
Construction Machinery Co., Waterloo, Iowa
Jaeger Machine Co., Columbus, Ohio
HOISTS—GASOLINE
American Cement Machine Co., Keckuk. Iowa
Construction Machinery Co., Waterloo, Iowa
Jaeger Machine Co., Columbus, Ohio
HOISTS—GOPE
Sedgwick Machine Works, New York
HOISTS—ROPE
Sedgwick Machine Works, New York
HOISTING BUCKETS—
See Buckets, Hoisting and Dumping
HOLDERS—DOOR
Coburn Trolley Track Co., Holyoke, Mass.
Frantz Mfg. Co., Sterling, Ill.
H. B. Ives Co., New Haven, Conn.
McKinney Mfg. Co., Sterling, Ill.
Stanley Works, New Britain, Conn.
Wagner Mfg. Co., Sterling, Ill.
McKinney Mfg. Co., Pittsburgh, Pa.
National Mfg. Co., Sterling, Ill.
McKinney Mfg. Co., Sterling, Ill.
McKinney Mfg. Co., Pittsburgh, Pa.
Masons Holloers—SASH—
See also Balances, Sash
McKinney Mfg. Co., Pittsburgh, Pa.
Mesker Brothers, St. Louis, Mo.
Stanley Works, New Britain, Conn.
HOLLOW TILE MACHINES—CEMENT
See Machines, Hollow Tile
HOME Willard Walker (House of the Model ice), Chicago
HOOKS—CEILING
H. B. Ives Co., New Haven, Conn.
HORSES—MASONS—
See Trestles
HOT AIR GRILLES—
See Grilles, Ventilating and Hot Air
HOT PLATES—
See Plates, Hot See Plates, Hot
HOT WATER HEATING SYSTEMS—
See Heating Plants, Hot Water
HOUSES—STEEL FRAME
nessee Coal, Iron & R. R. Co., Birming-HUMIDIFIERS
Hotstream Heater Co., Cleveland, Ohio HYDRATED LIME—
See Lime, Hydrated
INCINERATORS See Lime, Hydrated
INCINERATORS
American Radiator & Standard Sanitary Corp.,
Pittsburgh, Pa.
Donley Brothers Co., Cleveland, Ohio
Gabriel Steel Co., Detroit, Mich.
Hancock Iron Works, Pontiac, Mich.
Majestic Co., Huntington, Ind.
L. J. Mueller Furnace Co., Milwaukee, Wis.
INCINERATORS—CHIMNEY FED
Donley Brothers Co., Cleveland, Ohio
INKS—DRAWING
Warren-Knight Co., Philadelphia, Pa.
David White Co., Milwaukee, Wis.
INSERTS—CONCRETE
Donley Brothers Co., Cleveland, Ohio
Gabriel Steel Co., Detroit, Mich.
INSTRUMENTS—DRAWING
Warren-Knight Co., Philadelphia, Pa.
David White Co., Milwaukee, Wis.
INSTRUMENTS—SURVEYING
Bostrom-Brady Mfg. Co., Atlanta, Ga.
Warren-Knight Co., Philadelphia, Pa.
David White Co., Milwaukee, Wis.
INTERIOR TRIM—
See Trim, Interior
INSULATION—ACOUSTICAL—
See Boards, Sound Deadening;
Cement, Acoustical;
Felts, Sound Deadening;
Plaster, Sound Deadening;
Tile, Acoustical.

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INSULATION—COLD STORAGE—
See Boards, Insulating;
Paper, Insulating;
Felts, Insulating;
Wool, Mineral.

INSULATION—THERMAL—
See Blankets, Insulating;
Boards, Insulating;
Felts, Insulating;
Felts, Insulating;
Siding, Insulating;
Wool, Mineral.

INSULATION—ROCK WOOL—
See Wool, Mineral
INSULATING BLANKETS—
See Blankets, Insulating
INSULATING BOARD—
See Boards, Insulating
INSULATING FELTS—
See Felts, Insulating
INSULATING FELTS—
See Felts, Insulating
INSULATING FELTS—
See Felts, Insulating
INSULATING PAPER—
See Boards, Insulating
INSULATING PAPER—
See Paper, Insulating
INSULATING PAPER—
See Poor, Inculating
INSURANCE—LIFE—
Northwestern Mutual Life Insurance Co.,
Milwaukee, Wis.
IRON—ARCHITECTURAL
Cincinnati Iron Fence Co., Cincinnati, Ohio
IRON—BAR
Bethlehem Steel Co., Bethlehem, Pa.
Carnegie-Illinois Steel Corp., Pittsburgh, Pa.
IRON DOORS—
See Doors, Iron
IRON GRATINGS—
See Fence, Iron
IRON GRATINGS—
See Sea Grasings—
Sea Grasings— See Doors, Iron
IRON FENCE—
See Fence, Iron
IRON GRATINGS—
See Gratings, Iron
IRONS—ANGLE
Donley Brothers Co., Cleveland, Ohio
Gabriel Steel Co., Detroit, Mich.
Knape & Vogt Mfg. Co., Grand Rapids, Mich.
Majestic Co., Huntington, Ind.
McKinney Mfg. Co., Pittsburgh, Pa.
Stanley Works, New Britain, Conn.
Wagner Mfg. Co., Cedar Falls, Iowa
IRONS—PLANE
Stanley Tools, New Britain, Conn.
IRONS—SOLDERING
American Brass Co., New York
General Electric Co., Appl. & Merch. Dept..
Bridgeport, Conn.
Stanley Tools, New Britain, Conn.
IRONING BOARDS—BUILT-IN—
See Boards, Ironing
JACKS—LADDER
Ajax Building Bracket Co., Cleveland Heights,
Ohio
Steel Scaffolding Co., Evansville, Ind. Ajax Building Bracket Co., Cieverand Chio Ohio Steel Scaffolding Co., Evansville, Ind. Wagner Mfg. Co., Cedar Falls, Iowa JAMBS—DOOR (Steel) Mesker Bros, St. Louis, Mo. JAMBS—DOORS (Wood) Bradley Lbr. Co. of Arkansas, Warren, Ark. California Redwood Distributors, Ltd., Chicago JAMBS—DOORS (Wood)
Bradley Lbr. Co. of Arkansas, Warren, Ark. California Redwood Distributors, Ltd., Chicago
Curtis Companies, Inc., Clinton, Iowa
Exchange Sawmills Sales Co., Kansas City, Mo.
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Florida Louisiana Red Cypress Co., Jacksonville, Fla.
Frost Lumber Industries, Inc., Shreveport, La.
Huttig Mfg. Co., Muscatine, Iowa
Pacific Mutual Door Co., Tacoma, Wash.
Perfection Oak Flooring Co., Shreveport, La.
Shevlin Pine Sales Co., Minneapolis, Minn.
Southern Pine Lbr. Co., Texarkana, Texas
Weyerhaeuser Sales Co., St. Paul, Minn.
JOINTER HEADS—
See Heads, Jointer
JOINTER KNIVES—
See Knives, Jointer
JOINTER—WOODWORKING
American Saw Mill Machinery Co., Hackettstown, N.J.
Consolidated Machinery & Supply Co., Los
Angeles, Calif.
Delta Mfg. Co., Chicago
DeWalt Products Corp. Lancaster, Pa.
Mall Tool Co., Chicago
Master Woodworker Mfg. Co., Detroit, Mich.
Parks Woodworking Machine Co., Cincinnati,
Ohio
Porter-Cable Machine Co., Syracuse, N. Y.
Walker-Turner Co., Plainfield, N.J.
J. D. Wallace & Co., Chicago
JOINTS—EXPANSION
Armstrong Cork Co., Lancaster, Pa.
Philip Carey Co., Lockland, Cincinnati, Ohio
Celotex Corp. Chicago
Johns-Manville, New York
Wooster Products, Inc., Wooster, Ohio
JOINT FILLERS—
See Fillers, Joint
JOISTS—CONCRETE
W. E. Dunn Mfg. Co., Holland, Mich.
JOISTS—STEEL
Gabriel Steel Co., Detroit, Mich.
KALSOMINE
I. F. Laucks, Inc., Seattle, Wash.
Lowe Brothers Co., Dayton, Ohio
Pittsburgh Plate Glass Co., Pittsburgh, Pa. KALSOMINE
I. F. Laucks, Inc., Seattle, Wash.
Lowe Brothers Co., Dayton, Ohio
Pittsburgh Plate Glass Co., Pittsburgh, Pa.
U. S. Gypsum Co., Chicago
KITCHEN CABINETS—
See Cabinets, Kitchen
KITCHEN CABINET HARDWARE—
See Hardware
KITCHEN SINKS CO. KITCHEN SINKS-See Sinks, Kitchen

KITCHEN VENTILATORS—
See Ventilators, Kitchen
KITCHENETTES
Carr, Adams & Collier Co., Dubuque, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Kitchen Maid Corp., Andrews, Ind.
KNIVES—JOINTER
American Saw Mill Machinery Co., Hackettstown, N.J.
DeWalt Products Corp., Lancaster, Pa.
Master Woodworker Mfg. Co., Detroit, Mich.
Walker-Turner Co., Plainfield, N.J.
J. D. Wallace & Co., Chicago
KNIVES—MOULDING
American Saw Mill Machinery Co., Hackettstown, N.J.
Master Woodworker Mfg. Co., Detroit, Mich.
Walker-Turner Co., Plainfield, N.J.
J. D. Wallace & Co., Chicago
KNIVES—PLANER
American Saw Mill Machinery Co., Hackettstown, N.J.
Mall Tool Co., Chicago
Master Woodworker Mfg. Co., Detroit, Mich.
Fred W. Wappat, Pittsburgh, Pa.
KNIVES—PUTTY
Landon P. Smith, Inc., Irvington, N.J.
LACQUERS
Armstrong Cork Co., Lancaster, Pa.
Breinig Bros., Hoboken, N.J.
Lowe Brothers Co., Dayton, Ohio
Pittsburgh Plate Glass Co., Pittsburgh, Pa.
LADDERS—STORE (Rolling)
Coburn Trolley Track Co., Holyoke, Mass.
LADDERS—STORE (Rolling)
Coburn Trolley Track Co., Holyoke, Mass.
LADDER BRACKETS—
See Brackets, Ladder
LATCHES—
See Hardware, Door and Garage
Door
LATH—EXPANDED METAL
Milcor Steel Co., Milwaukee, Wis.
U. S. Gypsum Co., Chicago
LATH—INSULATING
Armstrong Cork Co., Lancaster, Pa.
Celotex Corp., Chicago
LATH—INSULATING
Armstrong Cork Co., Lancaster, Pa.
Celotex Corp., Chicago
LATH—INSULATING
Armstrong Cork Co., Lancaster, Pa.
Celotex Corp., Chicago
LATH—INSULATING
Ortinateed Products Corp., New York
U. S. Gypsum Co., Chicago
LATH—INSULATING
Armstrong Cork Co., Lancaster, Pa.
Celotex Corp., Chicago
LATH—Insulating Board Co., Portland, Ore.
Flintkote Co., Minneapolis, Minn.
Johns-Manville, New York
Masonite Corp., Chicago
National Gypsum Co., Buffalo, N.Y.
U. S. Gypsum Co., Chicago
National Gypsum Co., Buffalo, N.Y.
U. S. Gypsum Co., Chicago
National Gypsum Co., Buffalo, N.Y.
U. S. Gypsum Co., Chicago
National Gypsum Co., Buffalo, N.Y.
U. S. Gypsum Co., Chicago
LATH—WOOD
California Redwood Distributors, Ltd., Chicago, Ill.
Exchange Sa Exchange Sawmills Sales Co., Kansas City, Mo.

Florida Louisiana Red Cypress Co., Jackzonville, Fla.

Frost Lumber Industries, Inc., Shreveport,
La. Florida Louisiana Red Cypress Co., Jackzonville, Fla.
Frost Lumber Industries, Inc., Shreveport, La.
Perfection Oak Flooring Co., Shreveport, La.
Rainy Lake Lumber Co., Chicago
Shevlin Pine Sales Co., Minneapolis, Minn.
Southern Pine Lbr. Co., Texarkana, Tex.
Western Pine Assn., Portland, Ore.
—See page 224
Weyerhaeuser Sales Co., St. Psul, Minn.
LATHES—WOODWORKING
American Saw Mill Machinery Co., Hackettstown, N.J.
Delta Mfg. Co., Chicago
Walker-Turner Co., Plainfield, N.J.
J. D. Wallace & Co., Chicago
LAUNDRY TRAYS—See Trays, Laundry
LAVATORIES
American Radiator & Standard Sanitary Corp.,
Pittsburgh, Pa.
W. A. Case & Son Mfg. Co., Buffalo, N.Y.
Crane Co., Chicago
Eljer Co., Ford City, Pa.
Kohler Co., Kohler, Wis.
LAVATORY HARDWARE—
See Hardware, Lavatory
LETTERING GUIDES—
See Guides, Lettering
LETTERS AND NUMBERS (Metal)
Colorcrete Industries, Inc., Holland, Mich.
Edwards Mfg. Co., Cincinnati, Ohio
H. B. Ives Co., New Haven, Conn.
LEVEL SIGHTS—See Sights, Level
LEVELS—CARPENTERS
Bostrom-Brady Mfg. Co., Atlanta, Ga.
Stanley Tools, New Britain, Conn.
Warren-Knight Co., Philadelphia, Pa.
David White Co., Milwaukee, Wis.

LEVELS—FARM
Stanley Tools, New Britain, Conn.
Warren-Knight Co., Philadelphia, Pa.
David White Co., Milwaukee, Wis.

LEVELS—FARM
Stanley Tools, New Britain, Conn.
Warren-Knight Co., Philadelphia, Pa.
David White Co., Milwaukee, Wis.

LEVELS—LINE
Stanley Tools, New Britain, Conn.
Warren-Knight Co., Philadelphia, Pa.
David White Co., Milwaukee, Wis.

LEVELS—LINE
Stanley Tools, New Britain, Conn.
Warren-Knight Co., Philadelphia, Pa.
David White Co., Milwaukee, Wis.

LEVELS—MASONS
Stanley Tools, New Britain, Conn.
Warren-Knight Co., Philadelphia, Pa.
David White Co., Milwaukee, Wis.

LEVELS—Convertible
Stanley Tools, New Britain, Conn.
Warren-Knight Co., Philadelphia, Pa.
David White Co., Milwaukee, Wis.

LEVELS—Convertible
Stanley Tools, New Britain, Conn.
Warren-Knight Co., Philadelphia, Pa.

LIFTS—SASH—
See Hardware, Sash
LIGHTING CONTROLS—ELECTRIC
Frank Adam Electric Co., St. Louis, Mo.
Square D Co., Detroit, Mich.
LIGHTING FIXTURES—
See Fixtures, Lighting
LIGHTING PLANTS
Kohler Co., Kohler, Wis.
LIGHTING SYSTEMS—ELECTRIC
General Electric Co., Appl. & Merch. Dept.,
Bridgeport, Conn.
National Electric Products Corp., Pittsburgh,
Pa.

National Electric Products Corp., Pittsburgh, Pa.

LIGHTNING PROTECTION
Independent Protection Co., Goshen, Ind.

LIME—FINISHING
Celotex Corp., Chicago
Certain-teed Products Corp, New York
National Gypsum Co., Buffalo, N.Y.
Ohio Hydrate & Supply Co., Woodville, Ohio
U. S. Gypsum Co., Chicago
Woodville Lime Products Co., Toledo, Ohio
LIME—HYDRATED

Woodville Lime Products Co., Toledo, Ohio
LIME—HYDRATED
Certain-teed Products Corp., New York
Louisville Cement Co., Louisville, Ky.
National Gypsum Co., Buffalo, N.Y.
Ohio Hydrate & Supply Co., Woodville, Ohio
U. S. Gypsum Co., Chicago
Woodville Lime Products Co., Toledo, Ohio
LIME—LUMP
Louisville Cement Co., Louisville, Ky.
National Gypsum Co., Buffalo, N.Y.
Ohio Hydrate & Supply Co., Woodville, Ohio
U. S. Gypsum Co., Chicago
Woodville Lime Products Co., Toledo, Ohio
LIME—PREPARED

Ohio Hydrate & Supply Co., Woodville, Ohio U. S. Gypsum Co., Chicago Woodville Lime Products Co., Toledo, Ohio LIME—PREPARED Celotex Corp., Chicago Louisville Cement Co., Louisville, Ky. National Gypsum Co., Chicago Louisville Cement Co., Louisville, Ky. National Gypsum Co., Chicago Woodville Lime Products Co., Toledo, Ohio U. S. Gypsum Co., Chicago Woodville Lime Products Co., Toledo, Ohio LIME WATERPROOFING—
See Waterproofing, Lime LiNING—CLOSET (Cedar)
Bradley Lbr. Co. of Arkansas, Warren, Ark. E. L. Bruce Co., Memphis, Tenn. Frost Lumber Industries, Inc., Shreveport, La. Perfection Oak Flooring Co., Shreveport, La. Weyerhaeuser Sales Co., St. Paul, Minn. LINING—FLUE Johns-Manville, New York LINING—WALL Flintkote Co., New York Frost Lumber Industries, Inc., Shreveport, La. Homasote Co., Trenton, N.J. Johns-Manville, New York Masonite Corp., Chicago Standard Coated Products Corp, New York LINOLEUM—
See Coverings, Floor LINSEED OIL—
See Oil, Linseed LINTELS—STEEL Donley Brothers Co., Cleveland, Ohio Gabriel Steel Co., Detroit, Mich. Majestic Co., Huntington, Ind. Vento Steel Products Co., Muskegon, Mich. LOCKS—DOOR Frantz Mfg. Co., Sterling, Ill. Knape & Vogt Mfg. Co., Grand Rapids, Mich. McKinney Mfg. Co., Pittsburgh, Pa. National Brass Co., Grand Rapids, Mich. LOCKS—SASH American Cabinet Hardware Corp., Rockford, Ill. Curtis Companies, Inc., Clinton, Iowa Frantz Mfg. Co., Sterling, Ill.

Ill.
Curtis Companies, Inc., Clinton, Iowa
Frantz Mfg. Co., Sterling, Ill.
H. B. Ives Co., New Haven, Conn.
McKinney Mfg. Co., Pittsburgh, Pa.
Mesker Brothers, St. Louis, Mo.
National Mfg. Co., Sterling, Ill.
LOCKS—VENTILATION
H. B. Ives Co., New Haven, Conn.
LUMBER

LUMBER
Arkansas Soft Pine Bureau, Little Rock, Ark.
—See page 224
Bradley Lbr., Co. of Arkansas, Warren, Ark.
California Redwood Distr., Ltd., Chicago
Crosby Lumber & Mfg. Co., Crosby, Miss.
Exchange Sawmills Sales Co., Kansas City,

Crosby Lumber & Mfg. Co., Crosby, Miss.
Exchange Sawmills Sales Co., Kansas City, Mo.
Florida Louisiana Red Cypress Co., Jacksonville, Fla.
Frost Lumber Industries, Inc., Shreveport, La.
Perfection Oak Flooring Co., Shreveport, La.
Redwood Sales Co.—See adv. this page
Rainy Lake Lumber Co., Chicago
Walter G. Scrim, Los Angeles, Calif.
Shevlin Pine Sales Co., Minneapolis, Minn.
Smith Lumber Co., Red Bay, Ala.
W. T. Smith Lumber Co., Chapman, Ala.
Southern Pine Lbr. Co., Texarkana, Tex.
Uranis Lumber Co., Uranis, La.
Western Pine Assn., Portland, Ore.
—See page 224
Weyerhaeuser Sales Co., St. Paul, Minn.
LUMBER—ASBESTOS
Philip Carey Co., Lockland, Cincinnati, Ohio
Homasote Co., Trenton, N.J.
Johns-Manville, New York
Ruberoid Co., New York
LUMBER—TREATED
American Lumber & Treating Co., Chicago
Southern Pine Lbr. Co., Texarkana, Tex.
MACHINES—BLUEPRINTING
David White Co., Milwaukee, Wis.
MACHINES—BLUEPRINTING
Consolidated Machinery & Supply Co., Los
Angeles, Calif.
DeWalt Products Corp., Lancaster, Pa.
Master Woodworker Mfg. Co., Detroit, Mich.

MACHINES—CEMENT BRICK
Colorcrete Industries, Inc., Holland, Mich.
Concrete Equipment Co., Holland, Mich.
W. E. Dunn Mfg. Co., Holland, Mich.
MACHINES—CONCRETE BLOCK
Colorcrete Industries, Inc., Holland, Mich.
W. E. Dunn Mfg. Co., Holland, Mich.
W. E. Dunn Mfg. Co., Holland, Mich.
MACHINES—CONCRETE JOIST
W. E. Dunn Mfg. Co., Holland, Mich.
MACHINES—DISHWASHING
American Radiator & Standard Sanitary
Corp., Pittsburgh, Pa.
Crane Co., Chicago
MACHINES—DRAIN TILE (Cement)
Colorcrete Industries, Inc., Holland, Mich.
W. E. Dunn Mfg. Co., Holland, Mich.
W. E. Dunn Mfg. Co., Holland, Mich.
MACHINES—FENCE POST
Colorcrete Industries, Inc., Holland, Mich.
MACHINES—FENCE POST
Colorcrete Industries, Inc., Holland, Mich.
MACHINES—FLOOR POLISHING
American Floor Surfacing Machine Co., Toledo, Ohio
Hilger Co., St. Cloud, Minn.
Porter-Cable Machine Co., Syracuse, N.Y.
MACHINES—FLOOR SCRUBBING
American Floor Surfacing Machine Co., Toledo, Ohio
Clarke Sanding Mach. Co., Muskegon, Mich.
Hilger Co., St. Cloud, Minn.
Mall Tool Co., Chicago
Master Woodworker Mfg. Co., Detroit, Mich.
Porter-Cable Machine Co., Syracuse, N.Y.
Reid-Way Corp., Cedar Rapids, Iowa
Skilsaw, Inc., Chicago
Landon P. Smith, Inc., Irvington, N.J.
Stanley Electric Tool Division, New Britain,
Conn.
Wodack Electric Tool Corp., Chicago
MACHINES—HOLLOW TILE (Cement)

Skilsaw, Inc., Chicago
Landon P. Smith, Inc., Irvington, N.J.
Stanley Electric Tool Division, New Britain,
Conn.
Wodack Electric Tool Corp., Chicago
MACHINES—HOLLOW TILE (Cement)
Colorcrete Industries, Inc., Holland, Mich.
Concrete Equipment Co., Holland, Mich.
W. E. Dunn Mfg. Co., Holland, Mich.
MACHINES—MITERING
American Saw Mill Machinery Co., Hacketstown, N.J.
DeWalt Products Corp., Lancaster, Pa.
Master Woodworker Mfg. Co., Detroit, Mich.
Walker-Turner Co., Plainfield, N.J.
MACHINES—MORTISING
American Saw Mill Machinery Co., Hackettstown, Pa.
Delta Mfg. Co., Chicago
DeWalt Products Corp., Lancaster, Pa.
Mall Tool Co., Chicago
DeWalt Products Corp., Lancaster, Pa.
Mall Tool Co., Chicago
Master Woodworker Mfg. Co., Detroit, Mich.
J. D. Wallace & Co., Chicago
MACHINES—PAINT CONDITIONING
Landon P. Smith, Inc., Irvington, N.J.
MACHINES—PAINT MIXING
American Floor Surfacing Machine Co., Toledo, Ohio
Hilger Co., St. Cloud, Minn.
MACHINES—PAINT SPRAYING
Colorcrete Industries, Inc., Holland, Mich.
MACHINES—ROOFING TILE
Colorcrete Industries, Inc., Holland, Mich.
MACHINES—SANDPAPERING
American Floor Surfacing Machine Co., Toledo, Ohio
Delta Mfg. Co., Chicago
Porter-Cable Machine Co., Syracuse, N.Y.
Skilsaw, Inc., Chicago
Landon P. Smith, Inc., Irvington, N.J.
Walker-Turner Co., Plainfield, N.J.
MACHINES—SAW FILING
Foley Mfg. Co., Minneapolis, Minn.
MACHINES—SAW FILING
Foley Mfg. Co., Minneapolis, Minn.
MACHINES—SHAPING
American Saw Mill Machinery Co., Hackettstown, N.J.
R. L. Carter Division, New Britain, Conn.
Consolidated Machinery & Supply Co., Los
Angeles, Calif.
Delta Mfg. Co., Chicago
DeWalt Products Corp., Lancaster, Pa.
Master Woodworker Mfg. Co., Detroit, Mich.
Walker-Turner Co., Plainfield, N.J.
J. D. Wallace & Co., Chicago

SEQUOIA

for a durable wood specify

"SEQUOIA BRAND" REDWOOD REDWOOD SALES COMPAN SAN FRANCISCO, CALIF.

MACHINES—STAIR CUTTING
R. L. Carter Division, New Britain, Conn.
MACHINES—STUCCO
Colorcrete Industries, Inc., Holland, Mich.
Concrete Equipment Co., Holland, Mich.
MACHINES—TACKING AND STAPLING
A. L. Hansen Mfg. Co., Chicago
A. Markwell Mfg. Co., New York
MACHINES—TAMPING
See also Vibrators, Concrete
Colorcrete Industries, Inc., Holland, Mich.
W. E. Dunn Mfg. Co., Holland, Mich.
Jaeger Machine Co., Columbus, Ohio
MACHINES—TERRAZZO RUBBING
American Floor Surfacing Machine Co., Toledo, Ohio
Mall Tool Co., Chicago
Reid-Way Corp., Cedar Rapids, Iowa

MACHINES—WALL FINISHING (Cement)
Mall Tool Co., Chicago
MACHINES—WALLPAPER REMOV.

MACHINES—WALLPAPER REMOV.

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Landon P. Smith, Inc., Irvington, N. J.

MACHINES—WAXING
American Floor Surfacing Machine Co., Toledo, Ohio
Hilger Co., St. Cloud, Minn.
Pittsburgh Plate Glass Co., Pittsburgh, Pa.

MACHINERY—BANDSAW
American Saw Mill Machinery Co., Hackettstown, N. J.
Consolidated Machinery & Supply Co., Los
Angeles, Calif.
Delta Mfg. Co., Chicago
DeWalt Products Corp., Lancaster, Pa.
Master Woodworker Mfg. Co., Detroit, Mich.
Parks Woodworking Machine Co., Cincinnati,
Ohio
Walker-Turner Co., Plainfield, N. J.

Parks Woodworking Machine Co., Cincinnati, Ohio
Walker-Turner Co., Plainfield, N.J.
J. D. Wallace & Co., Chicago
MACHINERY—DRILLING
Delta Mg. Co., Chicago
Mall Tool Co., Chicago
Mall Tool Co., Chicago
Walker-Turner Co., Plainfield, N.J.
MACHINERY—WOODWORKING
(Power Driven)
American Saw Mill Machinery Co., Hacketstown, N. J.
Consolidated Machinery & Supply Co., Lou Angeles, Calif.
Construction Machinery Co., Waterloo, Iowa Delta Mg. Co., Chicago
De Walt Products Cor., Lancaster, Pa.
Mall Tool Co., Chicago
Master Woodworker Mg. Co., Detroit, Mich.
Parks Woodworking Machine Co., Cincinnati, Ohio
Porter-Cable Machine Co., Syracuse, N.Y.

Parks Woodworking Machine Co., Cincinnati, Ohio
Porter-Cable Machine Co., Syracuse, N.Y.
Walker-Turner Co., Plainfield, N.J.
J. D. Wallace & Co., Chicago
MACHINERY—WOODWORKING
(Universal)
American Saw Mill Machinery Co., Hackettstown, N. J.
R. L. Carter Division, New Britain, Conn.
Consolidated Machinery & Supply Co., Los
Angeles, Calif.
DeWalt Products Corp., Lancaster, Pa.
Master Woodworker Mfg. Co., Detroit, Mich.
Walker-Turner Co., Plainfield, N.J.
J. D. Wallace & Co., Chicago
MACHINERY—WOODWORKING
(Used)

MACHINERY—WOODWORKING
(Used)
Consolidated Machinery & Supply Co., Los
Angeles, Calif.
DeWait Products Corp., Lancaster, Pa.
Master Woodworker Mfg. Co., Detroit, Mich.
J. D. Wallace & Co., Chicago
MAIL BOXES—BUILT IN—
See Boxes, Mail (Built-in)
MAIL CHUTES—
See Chutes Mail

See Boxes, Mail (Built-in)
MAIL CHUTES—
See Chutes, Mail
MANHOLE COVERS—
See Covers, Manhole
MANTELS—CONCRETE
Readybuilt Products Co., Baltimore, Md.
MANTELS—WOOD
Carr. Adams & Collier Co., Dubuque, Iowa
Curtis Companies, Inc., Clinton, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Readybuilt Products Co., Baltimore, Md.
MARBLE—ARTIFICIAL
Gibbs Boardtile Corp., Chicago
Marsh Wall Products, Inc., Dover, Ohio
Tylac Co., Monticello, Ill.
MASONS CEMENT—
See Cement, Masons
MASONS HORSES—
See Trestles
MASONS HORSES—
See Levels, Masons
MASTIC—STRUCTURAL GLASS
Pecora Paint Co., Philadelphia, Pa.
MEDICINE CABINETS—
See Cabinets, Bathroom
MERCHANDISING—DISPLAYS
House & Garden, New York
METAL—EXPANDED
Milcor Steel Co., Milwaukee, Wis.

See Cabinets, Bathroom
MERCHANDISING—DISPLAYS
House & Garden, New York
METAL—EXPANDED
Milcor Steel Co., Milwaukee, Wis.
U. S. Gypsum Co., Chicago
METAL—FABRICATED
Edwards Mfg. Co., Cincinnati, Ohio
Milcor Steel Co., Milwaukee, Wis.
Sterling Wheelbarrow Co., Milwaukee, Wis.
METAL CEILINGS—
See Ceilings, Metal
METAL COLUMNS—
See Columns, Metal
METAL CORNERS—
See Corners, Metal
METAL LATH—
See Lath, Metal
MILLWORK—WHOLESALE
Bradley Lbr. Co., of Arkansas, Warren, Ark.
California Redwood Distributors, Ltd., Chicago
Cincinnati Iron Pence Co. Cincinnati Ohio

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Cincinnati Iron Fence Co., Cincinnati, Ohio
Curtis Companies, Inc., Clinton, Ohio
Exchange Sawmills Sales Co., Kansas City.
Mo.

Mo.
Farley & Loetscher Mfg. Co., Dubuque, Iows
Frost Lumber Industries, Inc., Shreveport, La.
Huttig Mfg. Co., Muscatine, Iowa
Pacific Mutual Door Co., Tacoma, Wash.
Perfection Oak Flooring Co., Shreveport, La.
Ponderosa Pine Woodwork, Chicago
—See page 224
Trimpak Corp., New York
Weyerhaeuser Sales Co., St. Paul, Minn.
MINERAL WOOL—
See Wool, Mineral

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MIRRORS—PLATE GLASS
Libbey-Owens-Ford Glass Co., Toledo, Ohio
Pittsburgh Plate Glass Co., Pittsburgh, Pa.
MIRRORS—WALL-HUNG
F. H. Lawson Co., Cincinnati, Ohio
MIRROR FIXTURES—
See Fixtures, Mirror
MITERS—COPPER
Edwards Mfg. Co., Cincinnati, Ohio
Milcor Steel Co., Milwaukee, Wis.
MITER BOXES—
See Boxes, Miter
MIXERS—BITUMINOUS
Kwik-Mix Concrete Mixer Co., Port Washington, Wis.
MIXERS—CONCRETE
American Cement Machine Co., Keokuk, Iowa Colorcrete Industries, Inc., Holland, Mich. Construction Machinery Co., Waterloo, Iowa W. E. Dunn Mfg. Co., Holland, Mich.
Jaeger Machine Co., Columbus, Ohio Kochring Co., Milwaukee, Wis.
Kwik-Mix Concrete Mixer Co., Port Washington, Wis.
Lansing Co., Lansing, Mich.
T. L. Smith Co., Milwaukee, Wis.
MIXERS—GROUT
Construction Machinery Co., Waterloo, Iowa Jaeger Machine Co., Columbus, Ohio
T. L. Smith Co., Milwaukee, Wis.
MIXERS—MORTAR AND PLASTER
Colorcrete Industries, Inc., Holland, Mich.
Jaeger Machine Co., Cleveland, Ohio
W. E. Dunn Mfg. Co., Holland, Mich.
Jaeger Machine Co., Cleveland, Ohio
W. E. Dunn Mfg. Co., Holland, Mich.
Jaeger Machine Co., Columbus, Ohio
Kwik-Mix Concrete Mixer Co., Port Washington, Wis.
T. I. Smith Co., Milwaukee, Wis.
MIXING BOXES—
See Boxes, Mixing
MORTAR—BRICK
Louisville Cement Co., Louisville, Ky.
Medusa Portland Cement Co., Cleveland, Ohio
Ohio Hydrate & Supply Co., Woodville, Ohio
Woodville Lime Products Co., Toledo, Ohio
MORTAR—LIME
Louisville Cement Co., Louisville, Ky.
Mortar BOXES, STEEL—
See Boxes, Mixing
MORTAR Colors—
See Colors, Mortar
MORTISERS—DOOR LOCK
R. L. Carter Division, New Britain, Conn.
Mall Tool Co., Chicago
Stanley Tools, New Britain, Conn.
Mortor Trucks—
See Trucks, Motor
Witter Co., Celevel, Mich.
Victor Electric Products, Inc., Cincinnati,
Ohio
Waker-Turner Co., Plainfield, N.J.
MOTOR TRUCKS—
See Trucks, Motor

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Walker-Turner Co., Plainfield, N.J. Walker-Turner Co., Plainfield, N.J.

MOTOR TRUCKS—
See Trucks, Motor
MOULDING—BASE
Alminium Co. of America, Pittsburgh, Pa.
American Brass Co., New York
Armstrong Cork Co., Lancaster, Pa.
Bradley Lbr. Co. of Arkansas, Warren, Ark.
Curtis Companies, Inc., Clinton, Iowa
Exchange Sawmills Sales Co., Kansas City,
Mo. Curtis Companies, Inc., Clinton, Iowa Exchange Sawmills Sales Co., Kansas City, Mo. Farley & Loetscher Mfg. Co., Dubuque, Iowa Florida Louisiana Red Cypress Co., Jacksonville, Fla. Frost Lumber Industries Inc., Shreveport, La. Gibbs Boardtile Corp., Chicago Knapp Bros. Mfg. Co., Joliet, Ill. Marsh Wall Products, Inc., Dover, Ohio Milcor Steel Co., Milwaukee, Wis. Pacific Mutual Door Co., Tacoma, Wash. Perfection Oak Flooring Co., Shreveport, La. Shevlin Pine Sales Co., Minneapolis, Minn. Tylac Co., Monticello, Ill. U. S. Gypsum Co., Chicago Weyerhaeuser Sales Co., St. Paul, Minn. Wilson Metal Products Co., Columbus, Ohio Wood Conversion Co., St. Paul, Minn. MOULDING—METAL Allmetal Weatherstrip Co., Chicago Aluminum Co. of America, Pittsburgh, Pa. B & T Floor Co., Columbus, Ohio Knape & Vogt Mfg. Co., Grand Rapids, Mich. Knapp Bros. Mfg. Co., Joliet, Ill. Marsh Wall Products, Inc., Dover, Ohio Masonite Corp., Chicago Milcor Steel Co., Miwaukee, Wis. Tylac Co., Monticello, Ill. U. S. Gypsum Co., Chicago Wilson Metal Products Co., Columbus, Ohio Wooster Products, Inc., Wooster, Ohio MOULDING—PICTURE Bradley Lbr. Co. of Arkansas, Warren, Ark. Curtis Companies, Inc., Clinton, Iowa Exchange Sawmills Sales Co., Kansas City, Mo. Mo.
Prost Lumber Industries, Inc., Shreveport, La.
Knapp Bros. Mfg. Co., Joliet, Ill.
Milcor Steel Co., Milwaukee, Wis.
U. S. Gypsum Co., Chicago
Weyerhaeuser Sales Co., St. Paul, Minn.
Wooster Products, Inc., Wooster, Ohio
MOULDING—TILE (Artificial)
Gibbs Boardtile Corp., Chicago
Marsh Wall Products, Inc., Dover, Ohio

MOULDING—WOOD

Armstrong Cork Co., Lancaster, Pa.

Bradley Lbr. Co. of Arkansas, Warren, Ark.
Curtis Companies, Inc., Clinton, Iowa
Exchange Sawmills Sales Co., Kansas City, Bradley Lbr. Co. of Arkansas, Warren, Ark. Curtis Companies, Inc., Clinton, Iowa Exchange Sawmills Sales Co., Kansas City, Mo.

Farley & Loetscher Mfg. Co., Dubuque, Iowa Florida Louisiana Red Cypress Co., Jacksonville, Fla.
Frost Lumber Industries, Inc., Shreveport, La. Marsh Wall Products, Inc., Dover Ohio Pacific Mutual Door Co., Tacoma, Wash. Rainy Lake Lumber Co., Chicago Shevlin Pine Sales Co., Minneapolis, Minn. Southern Pine Lbr. Co., Texarkana, Tex.
Western Pine Assn., Portland, Ore.
—See page 224
Weyerhaeuser Sales Co., St. Paul, Minn.
Wood Conversion Co., St. Paul, Minn.
Wood Conversion Co., St. Paul, Minn.
MOULDING CUTTERS—
See Cutters, Moulding
MOULDING KNIVES—
See Knives, Moulding
MOVEABLE STAIRS—
See Stairs, Movable
NAILS—ALUMINUM
Aluminum Co. of America, Pittsburgh, Pa.
NAILS—CLAMP
Tennessee Coal, Iron & R.R. Co., Birmingham, Ala.
NAILS—CUT
Aluminum Co. of America, Pittsburgh, Pa., W. H. Maze Co., Peru, Ill.
Tennessee Coal, Iron & R. R. Co., Birmingham, Ala.
NAILS—FURRING
Keystone Steel & Wire Co., Peoria, Ill.
Milcor Steel Co., Milwaukee, Wis.
Tennessee Coal, Iron & R. R. Co., Birmingham Ala.
NAILS—GALVANIZED
Deniston Co., Chicago
Edwards Mfg. Co., Cincinnati, Ohio
Keystone Steel & Wire Co., Peoria, Ill.
Wid-States Steel & Wire Co., Peoria, Ill.
Wid-States Steel & Wire Co., Crawfordsville, Ind.
Ruberoid Co., New York
Tennessee Coal, Iron & R. R. Co., Birming-Mid-States Steel & Wire Co., Crawfordsville, Ind.
Ruberoid Co., New York
Tennessee Coal, Iron & R. R. Co., Birmingham, Ala.
U. S. Gypsum Co., Chicago
NAILS—LEAD
Deniston Co., Chicago
Edwards Mfg. Co., Cincinnati, Ohio
Keystone Steel & Wire Co., Peoria, Ill.
W. H. Maze Co., Peru, Ill.
Mid-States Steel & Wire Co., Crawfordsville, Ind. W. H. Maze Co., Peru, H.
Mid-States Steel & Wire Co., Crawfordsville,
Ind.
National Lead Co., New York
Tennessee Coal, Iron & R.R. Co., Birmingham, Ala.
NAILS—LEAD SEAL
Deniston Co., Chicago
NAILS—ROOFING
Aluminum Co. of America, Pittsburgh, Pa.
Celotex Corp., Chicago
Deniston Co., Chicago
Edwards Mfg. Co., Cincinnati, Ohio
Ford Roofing Products Co., Chicago
Keystone Steel & Wire Co., Peoria, Ill.
W. H. Maze Co., Peru, Ill.
Mid-States Steel & Wire Co., Crawfordsville,
Ind. Ind.
Milcor Steel & Wire Co., Crawfordsville,
Ind.
Milcor Steel Co., Milwaukee, Wis.
Ruberoid Co., New York
Tennessee Coal, Iron & R. R. Co., Birmingham, Ala.
U. S. Gypsum Co., Chicago
Weyerhaeuser Sales Co., St. Paul, Minn.
NAILS—ZINC DIPPED
W. H. Maze Co., Peru, Ill.
NAIL SETS—
See Sets, Nail
NETTING—WIRE
Keystone Steel & Wire Co., Peoria, Ill.
Mid-States Steel & Wire Co., Crawfordsville,
Ind. Mid-States Steel & Wire Co., Crawfordsville, Ind.

Tennessee Coal, Iron & R. R. Co., Birmingham, Ala.

NEWELS—WOOD

Curtis Companies, Inc., Clinton, Iowa

Farley & Loetscher Mfg. Co., Dubuque, Iowa
Pacific Mutual Door Co., Tacoma, Wash.

Perfection Oak Flooring Co., Shreveport, La.

NUMBERS—HOUSE—
See Letters and Numbers

OIL—LINSEED

Archer-Daniels-Midland

Minn.

OIL—SOY BEAN OIL—SOY BEAN cher-Daniels-Midland Minn. Co., Minneapolis. Archer-Daniels-Midland Co., Minneapolis, Minn.
OIL BURNERS—
See Furnaces, Oil-Fired; Also Heating Plants, Oil-Fired
OPENERS—GARAGE DOOR (Electric)
Barber-Colman Co., Rockford, Ill.
Frantz Mfg. Co., Sterling, Ill.
Kinnear Mfg. Co., Sterling, Ill.
Kinnear Mfg. Co., Sterling, Ill.
Overhead Door Corp., Hartford City, Ind.
Rowe Mfg. Co., Galesburg, Ill.
Stanley Works, New Britain, Conn.
Wagner Mfg. Co., Cedar Falls, Iowa
OPERATORS—SASH
Detroit Steel Products Co., Detroit, Mich.
H. B. Ives Co., New Haven, Conn.
Mesker Brothers, St. Louis, Mo.
Vento Steel Products Co., Muskegon, Mich.
ORNAMENTS—CHIMNEY
Majestic Co., Huntington, Ind.
ORNAMENTS—SHEET METAL
Edwards Mfg. Co., Cincinnati, Ohio
Milcor Steel Co., Milwaukee, Wis.

National Electric Products Corp., Pittsburgh, Pa.

OUTLETS—TELEPHONE
General Electric Co., Appl. & Merch. Dept., Bridgeport, Conn.

OUTLET BOXES—
See Boxes, Outlet
OVERHEAD DORS—
See Carriers, Overhead
OVERHEAD DORS—
See Carriers, Overhead
OVERHEAD DORS—
See Receivers, Package
PAINTS—ALUMINUM
American Fluresit Co., Cincinnati, Ohio Breinig Bros., Hoboken, N.J.
Calbar Paint & Varnish Co., Philadelphia, Pa.
Carr, Adams & Collier Co., Dubuque, Iowa Ford Roofing Products Co., Chicago
Lowe Brothers Co., Dayton, Ohio
Peccora Paint Co., Philadelphia, Pa.
Pittsburgh Plate Glass Co., Pittsburgh, Pa.
Protection Products Mfg. Co., Kalamazoo, Mich.
L. Sonneborn Sons, Inc., New York
Wilbur & Williams Co., Boston, Mass.
PAINTS—ASPHALT
Armstrong Cork Co., Lancaster, Pa.
Barrett Co., Mew York Barber, N.J.
Breinig Bros., Hoboken, N.J.
Calbar Paint & Varnish Co., Philadelphia, Pa.
Philip Carey Co., Lockland, Cincinnati, Ohio
Carr, Adams & Collier Co., Dubuque, Iowa Flintkote Co., New York
Ford Roofing Products Co., Chicago
Lowe Brothers Co., Dayton, Ohio
Peccora Paint Co., Philadelphia, Pa.
Philip Carey Co., Lockland, Cincinnati, Ohio
Carr, Adams & Collier Co., Dubuque, Iowa Flintkote Co., New York
L. Sonneborn Sons, Inc., New York
D. Sharing Plate Glass Co., Pittsburgh, Pa.
L. Sonneborn Sons, Inc., New York
L. Sonneborn Sons, Inc., New York
L. Sonneborn Sons, Inc., New York
D. Sharing Plate Glass Co., Pittsburgh, Pa.
L. Sonneborn Sons, Inc., New York
D. Sharing Plate Glass Co., Pittsburgh, Pa.
L. Sonneborn Sons, Inc., New York
Wilbur & Williams Co., Boston, Mass.
PAINTS—AERING, New York
D. L. Sonneborn Sons, Inc., New York
Wilbur & Williams Co., Doubuque, Iowa
Colorrete Industries, Inc., Holland, Mich.
Flintkote Co., New York
Products Products Co., Chicago
L. F

ORNAMENTS—WALL
Celotex Corp., Chicago
Cincinnati Iron Fence Co., Cincinati, Ohio
Majestic Co., Huntington, Ind.
ORNAMENTAL BRACKETS—
See Brackets, Ornamental
ORNAMENTAL IRON—
See Iron, Ornamental; also Fence,
Iron; and Railings, Iron
OUTLETS—EAVES TROUGH
Edwards Mfg. Co., Cincinnati, Ohio
Mid-States Steel & Wire Co., Crawfordsville,
Ind. Mid-States Steel & Wire Co., Crawfordsville, Ind.
Milcor Steel Co., Milwaukee, Wis.
OUTLETS—ELECTRIC
Frank Adam Electric Co., St. Louis, Mo.
General Electric Co., Appl. & Merch. Dept.,
Bridgeport, Conn.
National Electric Products Corp., Pittsburgh,

I. F. Laucks, Inc., Seattle, Wash.
Lowe Brothers Co., Dayton, Ohio
Medusa Portland Cement Co., Cleveland, Ohio
Ohio Hydrate & Supply Co., Woodville, Ohio
U. S. Gypsum Co., Chicago
Woodville Lime Products Co., Toledo, Ohio
PAINTS—WATERPROOFING
American Fluresit Co., Cincinnati, Ohio
Barber Asphalt Corp., Barber, N.J.
Barrett Co., New York
Breinig Bros., Hoboken, N.J.
Calbar Paint & Varnish Co., Philadelphia, Pa.
Philip Carey Co., Lockland, Cincinnati, Ohio
Carr, Adams & Collier Co., Dubuque, Iowa
Donley Bros. Co., Cleveland, Ohio
Flintkote Co., New York
Ford Roofing Products Co., Chicago
Lowe Brothers Co., Dayton, Ohio
Medusa Portland Cement Co., Cleveland, Ohio
Peccora Paint Co., Philadelphia, Pa.
Pittsburgh Plate Glass Co., Pittsburgh, Pa.
Protection Products Mfg. Co., Kalamazoo,
Mich.
L. Sonneborn Sons, Inc., New York
Wilbur & Williams Co., Boston, Mass.

Mich.
L. Sonneborn Sons, Inc., New York
Wilbur & Williams Co., Boston, Mass.
PAINT BRUSHES—

Protection Products Mfg. Co., Kalamazoo, Mich.

L. Sonneborn Sons, Inc., New York
Wilbur & Williams Co., Boston, Mass.

PAINT BRUSHES—
See Brushes, Paint
PAINT FILLERS—
See Fillers, Paint
PAINT PAINT PAINT
PANPLIBOARDS—ELECTRIC
Frank Adam Electric Co., St. Louis, Mo.
Square D Co., Detroit, Mich.
PANELING—HARDWOOD
Cadwallader-Gibson Co., Los Angeles, Cal.
Frost Lumber Industries, Inc., Shreveport, La.
PANELING—WALL (Oak, Gum, Pine)
Arkansas Soft Pine Bureau, Little Rock, Ark.
—See page 224
PANELS—Fibre Board
Parmstrong Cork Co., of Ark., Warren, Ark.
Frost Lumber Industries, Inc., Shreveport, La.
Western Pine Assn., Portland, Ore.
—See page 224
PANELS—Fibre BOARD
Armstrong Cork Co., Lancaster, Pa.
Gibbs Boardtile Corp., Chicago
Marsh Wall Products, Inc., Dover Ohio
Masonite Corp., Chicago
National Gypsum Co., Buffalo, N.Y.
Upson Co., Lockport, N.Y.
PANELS—PLASTIC LAMINATE
Farley & Loetscher Mfg. Co., Dubuque, Iowa
General Electric Co., Plastics Dept., Pittsfield, Mass.
U. S. Plywood Corp., New York
PANELS—PLYWOOD
American Plywood Corp., New London, Wis.
Carr, Adams & Collier Co., Dubuque, Iowa
Harbor Plywood Corp., New Hondon, Wash.
—See page 224
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Harbor Plywood Corp., Hoquiam, Wash.
—See page 224
Harbor Plywood Corp., Hoquiam, Wash.
U. S. Plywood Corp., Hoquiam, Wash.
U. S. Plywood Corp., New York
Weyerhaeuser Sales Co., St. Paul, Minn.
PAPER—ASBESTOS
Philip Carey Co., Lockland, Cincinnati, Ohio
Johns-Manville, New York
Ruberoid Co., New York
Flintkote Co., Picago
Certain-teed Products Corp., New York
Flintkote Co., New York
Ford Roofing Products Co., Chicago
Locket Corp., Chicago
Lockland, Cincinnati, Ohio
Celotex Corp., Chicago
Lockland, Cincinnati, Ohio
Celotex Corp., Chicago
U. S. Gypsum Co., Chicago
Insulite Co., Mineapolis, Minn.
PAPER—Nolite Co., New York
Film Route Co., Policago
Texas Co., New York
Ford Roofing Products Co., Chicago
Ins

Wood Conversion Co., St. Paul, Minn.
PAPER—SAND
American Floor Surfacing Machine Co., Toledo, Ohio
Hilger Co., St. Cloud, Minn.
Porter-Cable Machine Co., Syracuse, N.Y.
Skilsaw, Inc., Chicago
Landon P. Smith, Inc., Irvington, N.J.
PARTITIONS—ASBESTOS WOOD
Johns-Manville, New York
PARTITIONS—EXPANDED METAL
Milcor Steel Co., Milwaukee, Wis.
U. S. Gypsum Co., Chicago
PARTITIONS—HOLLOW TILE
Certain-teed Products Corp., New York
U. S. Gypsum Co., Chicago
PARTITIONS—METAL
American Rolling Mill Co., Middletown, Ohio
Cincinnati Iron Fence Co., Cincinnati, Ohio
Henry Weis Mfg. Co., Elkhart, Ind.
PARTITIONS—METAL LATH
Milcor Steel Co., Milwaukee, Wis.
U. S. Gypsum Co., Chleago

PARTITIONS—ROLLING AND FOLD-

ING
Allith-Prouty, Inc., Danville, Ill.
Cincinnati Iron Fence Co., Cincinnati, Ohio
Coburn Trolley Track Co., Holyoke, Mass.
Kinnear Mfg. Co., Cedar Falls, Iowa
PARTITIONS—WOOD
Bradley Lbr. Co. of Arkansas, Warren, Ark.
Carr, Adams & Collier Co., Dubuque, Iowa
Exchange Sawmills Sales Co., Kansas City,
Mo.

Exchange Sawmills Sales Co., Kansas City,
Mo.
Mo.
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Frost Lumber Industries, Inc., Shreveport, La.
Southern Pine Lbr. Co., Texarkana, Texas
Weyerhaeuser Sales Co., St. Paul, Minn.
PARTITION HANGERS—
See Hangers, Sliding Partition
PARTITION TILE—
See Tile, Partition
PASTE—ALUM. PAINT PIGMENT
Aluminum Co. of America, Pittsburgh, Pa.
PASTE—WATERPROOFING
American Fluresit Co., Cincinnati, Ohio
Calbar Paint & Varnish Co., Philadelphia, Pa.
Medusa Portland Cement Co., Cleveland, Ohio
L. Sonneborn Sons, Inc., New York
PASTE—WHITE LEAD, RED LEAD
Lead Industries Assn., New York
—See page 224

L. Sonneborn Sons, Inc., New York
PASTE—WHITE LEAD, RED LEAD
Lead Industries Assn., New York
—See page 224
National Lead Co., New York
PASTE—ZINC PAINT
Calbar Paint & Varnish Co., Philadelphia, Pa.
Lowe Brothers Co., Dayton, Ohio
Pittsburgh Plate Glass Co., Pittsburgh, Pa.
L. Sonneborn Sons, Inc., New York
PAVERS—CONCRETE
American Cement Machine Co., Keokuk, Iowa
Jaeger Machine Co., Columbus, Ohio
Koehring Co., Milwaukee, Wis.
T. L. Smith Co., Milwaukee, Wis.
PICTURE MOULDINGS—
See Mouldings, Picture
PIPE—ALUMINUM
Aluminum Co. of America, Pittsburgh, Pa.
PIPE—CHIMNEY
Milcor Steel Co., Milwaukee, Wis.
PIPE—CONDUCTOR (Copper)
Edwards Mfg. Co., Cincinnati, Ohio
Milcor Steel Co., Milwaukee, Wis.
PIPE—CONDUCTOR (Sheet Metal)
Edwards Mfg. Co., Cincinnati, Ohio
Mid-State Steel & Wire Co., Crawfordsville,
Ind.
Milcor Steel Co., Milwaukee, Wis.

Mid-State Steel & Wire Co., Crawfordsville, Ind.
Milcor Steel Co., Milwaukee, Wis.
PIPE—COPPER
American Radiator & Standard Sanitary
Corp., Pittsburgh, Pa.
Crane Co., Chicago
PIPE—CULVERT (Corrugated Iron)
American Rolling Mill Co., Middletown, Ohio
Carnegie-Illinois Steel Corp., Pittsburgh, Pa.
Tennessee Coal, Iron & R. R. Co., Birming-ham, Ala.
PIPE—DRAIN
American Brass Co., New York
Crane Co., Chicago
PIPE—FLUE
Johns-Manville, New York
Majestic Co., Huntington, Ind.
Milcor Steel Co., Milwaukee, Wis.
Payne Furnace & Supply Co., Beverly Hills,
Calif.
PIPE—FURNACE

Calif.
PIPE—FURNACE
American Radiator & Standard Sanitary
Corp., Pittsburgh, Pa.
Henry Furnace & Foundry Co., Cleveland,

Ohio Majestic Co., Huntington, Ind. Milcor Steel Co., Milwaukee, Wis. L. J. Mueller Furnace Co., Milwaukee, Wis. Payne Furnace & Supply Co., Beverly Hills, Williams Wallace Co.—See adv. this page

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PIPE-PLUMBING (Brass and Copper) PIPE—PLUMBING (Brass and Copper)
American Brass Co., New York
American Radiator & Standard Sanitary
Corp., Pittsburgh, Pa.
Crane Co., Chicago
Eljer Co., Ford City, Pa.

PIPE-PLUMBING (Lead) Lead Industries Assn., New York
—See page 224
National Lead Co., New York

PIPE-SEWER Crane Co., Chicago Johns-Manville, New York

AETAA VESTOO

PIPE—STEEL American Rolling Mill Co., Middletown, Ohio Bethlehem Steel Co., Bethlehem, Pa. Carnegie-Illinois Steel Co., Pittsburgh, Pa. Crane Co., Chicago Tennessee Coal, Iron & R. R. Co., Birming-

Tennessee Coal, Iron & R. R. Co., Birm ham, Ala.
PIPE—STOVE
Milcor Steel Co., Milwaukee, Wis.
PIPE—WROUGHT IRON
Crane Co., Chicago
PIPE COVERINGS—
See Coverings, Boiler and Pipe
PIPE FITTINGS—
See Fittings, Pipe PIPE FITTINGS—
See Fittings, Pipe
PIPE HANGERS—
See Hangers, Pipe
PIPELESS FURNACES—
See Heating Plants, Pipeless Fur-

See Hangers, Pipe
PIPELESS FURNACES
See Heating Plants, Pipeless Furnaces
PITCH—ROOF
Barrett Co., New York
PLANS AND DESIGNS—
See Home Designs, Plans and Suggestions
PLANES—HAND
R. L. Carter Division, New Britain, Conn.
Stanley Tools, New Britain, Conn.
PLANES—PORTABLE ELECTRIC
R. L. Carter Division, New Britain, Conn.
PLANERS—WOOD (Power-Driven)
American Saw Mill Machinery Co., Hacketstown, N. J.
R. L. Carter Division, New Britain, Conn.
Mall Tool Co., Chicago
Master Woodworker Mfg. Co., Detroit, Mich.
Parks Woodworker Mfg. Co., Detroit, Mich.
Parks Woodworking Machine Co., Cincinnati, Ohio
PLANER KNIVES—
See Knives, Planer
PLASTER—FIBERED
Ohio Hydrate & Supply Co., Woodville, Ohio
PLASTER—GYPSUM
Celotex Corp., Chicago
Certain-teed Products Corp., New York
National Gypsum Co., Buffalo, N.Y.
U. S. Gypsum Co., Chicago
Certain-teed Products Corp., New York
National Gypsum Co., Buffalo, N.Y.
Ohio Hydrate & Supply Co., Woodville, Ohio
U. S. Gypsum Co., Chicago
Woodville Lime Products Corp., New York
National Gypsum Co., Buffalo, N.Y.
Ohio Hydrate & Supply Co., Woodville, Ohio
PLASTER—LIME
Ohio Hydrate & Supply Co., Woodville, Ohio
PLASTER—DATCHING
Pecora Paint Co., Philadelphia, Pa.
PLASTER—SOUND ABSORBING
Celotex Corp., Chicago
Certain-teed Products Corp., New York
National Gypsum Co., Buffalo, N.Y.
U. S. Gypsum Co., Chicago
PLASTER—WALL
Certain-teed Products Corp., New York
National Gypsum Co., Buffalo, N.Y.
U. S. Gypsum Co., Chicago
Woodville Lime Products Corp., New York
National Gypsum Co., Buffalo, N.Y.
U. S. Gypsum Co., Chicago
Woodville Lime Products Corp., New York
National Gypsum Co., Buffalo, N.Y.
Ohio Hydrate & Supply Co., Woodville, Ohio
U. S. Gypsum Co., Chicago
Woodville Lime Products Corp., New York
National Gypsum Co., Buffalo, N.Y.
Ohio Hydrate & Supply Co., Woodville, Ohio
U. S. Gypsum Co., Chicago
Woodville Lime Products Corp., New York
National Gypsum Co., Buffalo, N.Y.
Ohio Hydrate & Supply Co., Woodville, Ohio
Dethlem Steel Co., Chicago
Woodville Lime Products Corp., Pittsburgh, Pa.
American

PLATES—STACK
American Rolling Mill Co., Middletown, Ohio
Carnegie-Illinois Steel Corp., Pittsburgh, Pa.

PLATES—SWITCH
General Electric Co., Appl. & Merch. Dept.,
Bridgeport, Conn.

PLATES—TANK
American Brass Co., New York, N.Y.
American Rolling Mill Co., Middletown, Ohio
Carnegie-Illinois Steel Corp., Pittsburgh, Pa.
Tennessee Coal, Iron & R. R. Co., Birmingham. Ala.

PLATE GLASS— See Glass, Plate

PLUGS—FUSE
General Electric Co., Appl. & Merch. Dept..
Bridgeport, Conn.
National Electric Products Corp., Pittsburgh,

PLUGS—WALL
Donley Brothers Co., Cleveland, Ohio
General Electric Co., Appl. & Merch.
Bridgeport, Conn.
F. D. Kees Mfg. Co., Beatrice, Nebr.

PLUMBS David White Co., Milwaukee, Wis. PLUMBING FIXTURES— See Fixtures, Plumbing

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PLUMBING PIPE—
See Pipe, Plumbing
PLYWOOD PANELS—
See Panels, Plywood
POINTS—GLAZIERS
H. Maze Co., Peru, Ill.
POLISHING BRUSHES—
See Brushes, Polishing
PORCH COLUMNS—
See Columns, Porch
PORCH BASES—
See Bases, Porch
PORCH ENCLOSURES—
See Enclosures, Porch
PORCH RAILS— PORCH RAILS—
See Rails, Porch
PORCH SCREENS—
See Enclosures, Porch See Enclosures, Porch
PORTABLE BUILDINGS—
See Buildings, Portable
PORTABLE POWER SAWS—
See Saws, Portable Power
PORTLAND CEMENT—
See Cement, Portland
POSTS—CLOTHES
Donley Brothers Co., Cleveland, Ohio
Keystone Steel & Wire Co., Peoria, Ill.
Knape & Vogt Mfg. Co., Grand Rapids, Mich.
Weyerhaueser Sales Co., St. Paul, Minn.
POSTS—FENCE (Steel)
Cincinnati Iron Fence Co., Cincinnati, Ohio
Keystone Steel & Wire Co., Peoria, Ill.
Mid-States Steel & Wire Co., Crawfordsville,
Ind. Keystone Steel & Wire Co., Peoria, Ill.
Mid-States Steel & Wire Co., Crawfordsville,
Ind.
Mileor Steel Co., Milwaukee, Wis.
Tennessee Coal, Iron & R. R. Co., Birmingham, Ala.
POSTS—FENCE (Wood)
Florida Louisiana Red Cypress Co., Jacksonville, Fla.
Frost Lumber Industries, Inc., Shreveport, La.
Illinois Wire & Mfg. Co., Joliet, Ill.
Southern Pine Lbr. Co., Texarkana, Tex.
Weyerhaueser Sales Co., St. Paul, Minn.
POWDER—ALUMINUM PAINT PIGMENT
Aluminum Co. of America, Pittsburgh, Pa.
PRESERVATIVES—METAL
See also Paints, Metal Protective
Parker Rust Proof Co., Detroit, Mich.
PRESERVATIVES—WOOD
American Lumber and Treating Co., Chicago
Barrett Co., New York
E. L. Bruce Co., Memphis, Tenn.
Calbar Paint & Varnish Co., Philadelphia, Pa.
Curtis Companies, Inc., Ciinton, Iowa
Frost Lumber Industries, Inc., Shreveport, La.
I. F. Laucks, Inc., Seattle, Wash.
Lowe Brothers Co., Dayton, Ohio
National Door Mfrs. Assn., Chicago
—See page 224
Protection Products Mfg. Co., Kalamazoo,
Mich.
Ruberoid Co., New York
L. Sonneborn Sons, Inc., New York
Weyerhaueser Sales Co., St. Paul, Minn.
PROTECTORS—EDGE
Mid-States Steel & Wire Co., Crawfordsville,
Ind.
Wilson Metal Products Inc. Wooster Ohio PROTECTORS—EDGE

Mid-States Steel & Wire Co., Crawfordsville,
Ind.

Wilson Metal Products Co., Columbus, Ohio
Wooster Products, Inc., Wooster, Ohio
PROTRACTORS—
See Instruments, Drawing
PULLEYS—SASH
Andersen Corp., Bayport, Minn.
Grand Rapids Hardware Co., Grand Rapids,
Mich.
Knape & Vogt Mfg. Co., Grand Rapids, Mich.
Stanley Works, New Britain, Conn.
PUMPS—CONTRACTORS'
Construction Machinery Co., Waterloo, Iowa
Homelite Corp., Port Chester, N.Y.
Jaeger Machine Co., Columbus, Ohio
Mall Tool Co., Chicago
PUMPS—DRAIN
Construction Machinery Co., Waterloo, Iowa
Crane Co., Chicago
Jaeger Machine Co., Columbus, Ohio
PUMPS—FORCE
Construction Machinery Co., Waterloo, Iowa
Jaeger Machine Co., Columbus, Ohio
PUMPS—FORCE
Construction Machinery Co., Waterloo, Iowa
Jaeger Machine Co., Columbus, Ohio
PUTTY—BOILER
PECOTA Paint & Varnish Co., Philadelphia, Pa.
PUTTY—METAL SASH
Calbar Paint & Varnish Co., Philadelphia, Pa.
Mesker Brothers, St. Louis, Mo.
Pecora Paint Co., Philadelphia, Pa.
PUTTY—ROOFING
Barber Asphalt Corp., Barber, N. J.
Calbar Paint & Varnish Co., Philadelphia, Pa.
PHITY—ROOFING
Barber Asphalt Corp., Barber, N. J.
Calbar Paint & Varnish Co., Philadelphia, Pa.
Philip Carey Co., Lockland, Cincinnati, Ohio
Flinktote Co., New York
Ford Roofing Products Co., Chicago
Johns-Manville, New York
Ford Roofing Products Co., Chicago
PUTTYLESS WINDOWS—
See Windows, Puttvless
RACKS—HAT, SHOE, TIE—
See Fixtures, Wardrobe
RADIATORS—HOT WATER AND
STEAM
American Radiator & Standard Sanitary
Corp., Pittsburgh, Pa.
Crane Co. Chicago RADIATORS—HOT WATER AND
STEAM
American Radiator & Standard Sanitary
Corp., Pittsburgh, Pa.
Crane Co., Chicago
Kohler Co., Kohler, Wis.
Modine Mfg. Co., Racine, Wis.
RADIATOR COVERS—
See Enclosures, Radiator
RADIATOR VALVES—
See Valves, Radiator
RAIL BRACKETS—
See Brackets, Rail or Track

RAILS—BARN DOOR

Allith-Prouty, Inc., Danville, Ill.
Coburn Trolley Track Co., Holyoke, Mass.
Frantz Mfg. Co., Sterling, Ill.
McKinney Mfg. Co., Pittsburgh, Pa.
National Mfg. Co., Sterling, Ill.
Wagner Mfg. Co., Cedar Falls, Iowa
Weyerhaueser Sales Co., St. Paul, Minn.
RAILS—PORCH
Bilco Mfg. Co., New Haven, Conn.
Bradley Lbr. Co. of Arkansas, Warren, Ark.
Carr, Adams & Collier Co., Dubique, Iowa
Cincinnati Iron Fence Co., Cincinnati, Ohio
Curtis Companies, Inc., Clinton, Iowa
Exchange Sawmills Sales Co., Kansas City,
Mo. Cincinnati Iron Fence Co., Cincinnati, Ohio Curtis Companies, Inc., Clinton, Iowa Exchange Sawmills Sales Co., Kansas City, Mo.
Farley & Loetscher Mfg. Co., Dubuque, Iowa Frost Lumber Industries, Inc., Shreveport, La. Weyerhaueser Sales Co., St. Paul, Minn. RAILINGS—BRASS Aluminum Co. of America, Pittsburgh, Pa. RAILINGS—BRASS American Brass Co., New York RAILINGS—IRON Bilco Mfg. Co., New Haven, Conn. Cincinnati Iron Fence Co., Cincinnati, Ohio Crane Co., Chicago RAILINGS—PIPE Aluminum Co. of America, Pittsburgh, Pa. Cincinnati Iron Fence Co., Cincinnati, Ohio Crane Co., Chicago RANGES—COAL Locke Stove Co., Kansas City, Mo. Round Oak Co., Dowagiac, Mich. RANGES—ELECTRIC Edison General Electric Appliance Co., Chicago General Electric Co., Appl. & Merch. Dept., Bridgeport, Conn.
Norge Heating & Conditioning Division, Detroit, Mich. RANGES—GAS Coleman Lamp & Stove Co., Wichita, Kans. Norge Heating & Conditioning Division, Detroit, Mich.
RANGES—GARBAGE
Donley Brothers Co., Cleveland, Ohio Majestic Co., Huntington, Ind.
RECEIVERS—GARBAGE
Donley Brothers, Cleveland, Ohio Gabriel Steel Co., Milwaukee, Wis. RECEPTACLES—CONDUIT BOX General Electric Products Corp., Pittsburgh, Pa. RECEPTACLES—FLOOR Frank Adam Electric Co., St. Louis, Mo. Corneal Electric Co., National Electric Products Corp., Pittsburgh, Ps.

RECEPTACLES—FLOOR
Frank Adam Electric Co., St. Louis, Mo.
General Electric Co., Appl. & Merch. Dept., Bridgeport, Conn.
National Electric Products Corp., Pittsburgh, Ps.

RECEPTACLES—OUTLET BOX
Frank Adam Electric Co., St. Louis, Mo.
General Electric Co., Appl. & Merch. Dept., Bridgeport, Conn.
National Electric Products Corp., Pittsburgh, Ps. National Electric Products Corp., Pittsburgh, Pa.

RECEPTACLES—SHOWER
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
Crane Co., Chicago Kohler, Wis.
Henry Weis Mfg. Co., Elkhart, Ind.

REFRIGERATORS—ELECTRIC Edison General Electric Appliance Co., Chicago General Electric Co., Appl. & Merch. Dept., Bridgeport, Conn.
Norge Heating & Conditioning Division, Detroit, Mich.

REFRIGERATORS—GAS
Servel, Inc., Evansville, Ind.

REGISTERS—FLOOR
Henry Furnace & Foundry Co., Cleveland, Ohio Ohio
Majestic Co., Huntington, Ind.
Pacific Gas Radiator Co., Huntington Park,
Calif.
REGISTERS—WALL
Barber-Colman Co., Rockford, Ill.
Henry Furnace & Foundry Co., Cleveland,
Ohio Henry Furnace & Foundry Co., Cleveland, Ohio
Majestic Co., Huntington, Ind.
Milcor Steel Co., Milwaukee, Wis.
Pacific Gas Radiator Co., Huntington Park, Calif.
Payne Furnace & Supply Co., Beverly Hills, Calif.
REGLETS—COPPER
American Brass Co., New York
REGULATORS—FURNACE
American Radiator & Standard Sanitary
Corp., Pittsburgh, Pa.
Calesco Corp., Lynn, Mass.
Crane Co., Chicago
Henry Furnace & Foundry Co., Cleveland, Ohio
Majestic Co., Huntington, Ind.
Payne Furnace & Supply Co., Beverly Hills,
Calif.
Round Oak Co., Dowagiac, Mich.
REGULATORS—TEMPERATURE—
See Thermostats
REGULATORS—WATER
Crane Co., Chicago
Hotstream Heater Co., Cleveland, Ohio
REINFORCING—CONCRETE AND
STUCCO
Bethlehem Steel & Wire Co., Peoria, Ill.

Milcor Steel Co., Milwaukee, Wis.
Ruberoid Co., New York
U. S. Gypsum Co., Chicago
REMOVERS—PAINT AND VARNISH
Breinig Brothers, Hoboken, N. J.
Calbar Paint & Varnish Co., Philadelphia, Pa.
Carr, Adams & Collier Co., Dubuque, Iowa
Ford Roofing Products Co., Chicago
Lowe Brothers Co., Dayton, Ohio
Pittsburgh Plate Glass Co., Pittsburgh, Pa.
RESISTANTS—ACID RESITANTS—ACID
Barrett Co., New York
L. Sonneborn Sons, Inc., New York
L. Sonneborn Sons, Inc., New York
RESAW MACHINES—See Machines, Resaw
RETOOTHERS—SAW
FOLOY Mineapolis, Minn.
RIDGING—ASBESTOS
Philip Carey Co., Lockland, Cincinnati, Ohio Flintkote Co., New York
Johns-Manville, New York
RIDGING—SHEET METAL
American Rolling Mill Go., Middletown, Ohio Edwards Mfg. Co., Cincinnati, Ohio
RIDGING—SHEET METAL
American Rolling Mill Go., Middletown, Ohio Edwards Mfg. Co., Cincinnati, Ohio
RIVETS—ALUMINUM
Aluminum Co. of America, Pittaburgh, Pa.
RODS—ALUMINUM
Aluminum Co. of America, Pittaburgh, Pa.
RODS—ALUMINUM
Aluminum Co. of America, Pittaburgh, Pa.
RODS—ALWINUM
Aluminum Co., New York
Knape & Vogt Mfg. Co., Grand Rapids, Mich.
RODS—COPPER
RODS—HANGER—Wardrobe
RODS—HANGER—Wardrobe
RODS—HANGER—Wardrobe
RODS—HANGER—Wardrobe
RODS—HANGER—Wardrobe
RODS—LEVELING
Bostrom-Brady Mfg. Co., Atlanta, Ga.
Warren-Knight Co., Philadelphia, Pa.
David White Co., Milwaukee, Wis.
ROLLERS—DOOR
Allith-Prouty, Inc., Danville, Ill.
Coburn Trolley Track Co., Holyoke, Mass.
Frantz Mfg. Co., Sterling, Ill.
Knape & Vogt Mfg. Co., Grand Rapids, Mich.
McKinney Mfg. Co., Co., Grand Rapids, Mich.
McKinney Mfg. Co., Sterling, Ill.
Knape & Vogt Mfg. Co., Grand Rapids, Mich.
McKinney Mfg. Co., Sterling, Ill.
Stanley Works, New Britain, Conn.
Wagner Mfg. Co., Berbourgh
ROLLING PONTING—
See Doors, Rolling
ROLLING PONTING—
See Partitions, Rolling & Folding
ROLLING PONTING
ROLLIN ROOFING—BUILT UP
Barber Asphalt Corp, Barber, N.J.
Barrett Co., New York
Celotex Corp., Chicago
Philip Carey Co., Lockland, Cincinnati, Ohio
Certain-teed Products Corp., New York
Flintkote Co., New York
Ford Roofing Products Co., Chicago
Johns-Manville, New York
B. F. Nelson Mfg. Co., Minneapolis, Minn.
Ruberold Co., New York
Texas Co., New York
U.S. Gypsum Co., Chicago
ROOFING—COPPER SHINGLES
American Brass Co., New York
Edwards Mfg. Co., Cincinnati, Ohio
Milcor Steel Co., Milwaukee, Wis.
ROOFING—DRIP EDGE
Barber Asphalt Corp., Barber, N.J.
Edwards Mfg. Co., Cincinnati, Ohio
Mid-States Steel & Wire Co., Crawfordsville,
Ind.
Milcor Steel Co., Milwaukee, Wis.

Ind.
Milcor Steel Co., Milwaukee, Wis.
ROOFING—METAL (Corrugated)
Aluminum Co. of America, Pittsburgh, Pa.
American Rolling Mill Co., Middletown, Ohio
Bethlehem Steel Co., Bethlehem, Pa.
Carnegie-Illinois Steel Corp., Pittsburgh, Pa.
Edwards Mfg. Co., Cincinnati, Ohio
Mid-States Steel & Wire Co., Crawfordsville,
Ind.

Ind.
Ind.
Milcor Steel Co., Milwaukee, Wis.
Tennessee Coal, Iron & R.R. Co., Birmingham,

Tennessee Coal, Iron & R.R. Co., Birmingham, Ala.

ROOFING—METAL (Sheets)
Aiuminum Co. of America, Pittsburgh, Pa. American Brass Co., New York
American Rolling Mill Co., Middletown, Ohio Bethlehem Steel Co., Bethlehem, Pa.
Carnegie-Illinois Steel Corp., Pittsburgh, Pa. Detroit Steel Products Co., Detroit, Mich. Edwards Mfg. Co., Cincinnati, Ohio Follansbee Steel Corp., Pittsburgh, Pa. Mid-States Steel & Wire Co., Crawfordsville, Ind.

Ind.
Milcor Steel Co., Milwaukee, Wis.
National Lead Co., New York
Tennessee Coal, Iron & R.R. Co., Birmingham, Ala.
ROOFING—METAL (Shingles)
Edwards Mfg. Co., Cincinnati, Ohio
Mid-States Steel & Wire Co., Crawfordsville,
Ind.

Edwards Mfg. Co., Cincinnati, Ohio
Mid-States Steel & Wire Co., Crawfordsville,
Ind.
Milcor Steel Co., Milwaukee, Wis.
Tennessee Coal, Iron & R.R. Co., Birmingham, Ala.
Williams Wallace Co., San Francisco, Calif.
ROOFING—METAL (Terne Plate)
Carnegie-Illinois Steel Corp., Pittsburgh, Pa.
Follansbee Steel Corp., Pittsburgh, Pa.
ROOFING—ROLL (Composition)
Barber Asphalt Corp., Barber, N.J.
Barrett Co., New York
Philip Carey Co., Lockland, Cincinnati, Ohio
Celotex Corp., Chicago
Certain-teed Products Corp., New York
Flintkote Co., New York
Ford Roofing Products Co., Chicago
Johns-Manville, New York
Ruberoid Co., New York
Texas Co., New York
Texas Co., New York
RoOFING—ROLL (Metal)
American Rolling Mill Co., Middletown, Ohio
Bethlehem Steel Co., Ethlehem, Pa.
Carnegie-Illinois Steel Corp., Pittsburgh, Pa.
Edwards Mfg. Co., Cincinnati, Ohio
Follansbee Steel Corp., Pittsburgh, Pa.
Mid-States Steel & Wire Co., Crawfordsville,
Ind.
Milcor Steel Co., Milwaukee, Wis.

Ind.
Milcor Steel Co., Milwaukee, Wis.
Tennessee Coal, Iron & R.R. Co., Birmingham,

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Barrett Co., New York
Philip Carey Co., Lockland, Cincinnati, Ohio
Certain-teed Products Corp., New York
Flintkote Co., New York
Ford Roofing Products Co., Chicago
Johns-Manville, New York
Texas Co., New York
Texas Co., New York
ROOFING—STAINED SHINGLES
Weyehaeuser Sales Co., St. Paul, Minn.
ROOFING—TILE (Asbestos)
Johns-Manville, New York
RUBEROIC Co., New York
ROOFING—TILE (Cement)
Johns-Manville, New York
ROOFING—TILE (Cement)
Johns-Manville, New York
ROOFING—TILE (Company)
Roofing—TILE (Gypsum)
National Gypsum Co., Buffalo, N.Y.
U. S. Gypsum Co., Chicago

National Gypsum Co., Buff. U. S. Gypsum Co., Chicago

ROOFING—TILE (Metal)
Edwards Mfg. Co., Cincinnati, Ohio
Milcor Steel Co., Milwaukee, Wis.
ROOFING—TIN
Carnegie-Illinois Steel Corp., Pittsburgh, Pa.
Edwards Mfg. Co., Cincinnati, Ohio
Follansbee Steel Corp., Pittsburgh, Pa.
Milcor Steel Co., Milwaukee, Wis.
Tennessee Coal, Iron & R. R. Co., Birmingham, Ala.
ROOFING—WOOD SHINGLES
California Redwood Distributors, Ltd., Chicago

Exchange Sawmills Sales Co., Kansas City,

Exchange Sawmills Sales Co., Kansas City, Mo.
Florida Louisiana Red Cypress Co., Jacksonville, Fla.
Red Cedar Shingle Bureau, Seattle, Wash.
—See page 224
Weyerhaueser Sales Co., St. Paul, Minn.
ROOFING BRACKETS
See Brackets, Roofing
ROOFING CEMENT—
See Cement, Roofing
ROOFING NAILS—
See Nails, Roofing
ROOFING PAPER—
See Paper, Roofing and Sheathing
ROOFING TILE MACHINES—
See Machines, Roofing Tile
ROOM HEATERS—
See Heaters, Cabinet; also Heaters,

See Heaters, Cabinet; also Heaters, Room

ROPE ROPE
Puritan Cordage Mills, Inc., Louisville, Ky.
Samson Cordage Works, Boston, Mass.
Sedgwick Machine Works, New York
ROPE—AWNING
Puritan Cordage Mills, Inc., Louisville, Ky.
Samson Cordage Works, Boston, Mass.
ROUTERS

ROPE—AWNING
Puritan Cordage Mills, Inc., Louisville, Ky.
Samson Cordage Works, Boston, Mass.
ROUTERS
R. L. Carter Division, New Britain, Conn.
Consolidated Machinery & Supply Co., Los
Angeles, Calif.
De Walt Products Corp., Lancaster, Pa.
Walker-Turner Co., Plainfield, N. J.
RULES—CARPENTERS'
Stanley Tools, New Britain, Conn.
Warren-Knight Co., Philadelphia, Pa.
RULES—SLIDE SCALE
Stanley Works, New Britain, Conn.
Warren-Knight Co., Philadelphia, Pa.
RULES—STEEL
Stanley Works, New Britain, Conn.
Warren-Knight Co., Philadelphia, Pa.
RULES—STEEL
Stanley Works, New Britain, Conn.
Warren-Knight Co., Philadelphia, Pa.
RULES—STEEL
Stanley Works, New Britain, Conn.
Warren-Knight Co., Philadelphia, Pa.
RULES—STEEL
Stanley Works, New Britain, Conn.
Warren-Knight Co., Chicaled, On.
SAFES—WALL
Brush-Punnett Inc., Rochester, N.Y.
SALAMANDERS
Construction Machinery Co., Waterloo, Iowa
Donley Brothers Co., Cleveland, Ohio
Edwards Mfg. Co., Cincinnati, Ohio
SAND SCREENS—
See Sereens, Sand and Gravel
SANDERS—FLOOR—
See Machines, Floor Surfacing; also
Edgers, Floor
SANDERS—WOODWORKING (Belt)
American Floor Surfacing Machine Co., Toledo, Ohio
De Walt Products Corp., Lancaster, Pa.
Porter-Cable Machine Co., Syracuse, N.Y.
Skilsaw, Inc., Chicago
Syracuse GuildTool Co., Towson, Md.
R. L. Carter Division, New Britain, Conn.
DeWalt Products Corp., Lancaster, Pa.
Mall Tool Co., Chicago
Porter-Cable Machine Co., Syracuse, N.Y.
Skilsaw, Inc., Chicago
Stanley Electric Tool Division, New Britain,
Conn.
Walker-Turner Co., Plainfield, N.J.
SANDPAPER—

Walker-Turner Co., Plainfield, N.J. SANDPAPER—

SANDPAPER—
See Paper
SANDPAPERING MACHINES—
See Machines, Sandpapering
SANITARY CLOSETS—
See Closets, Chemical
SASH—BASEMENT—
See Frames, Basement Window
SASH—HOLLOW METAL
Aluminum Co. of America, Pittsburgh, Pa.
Edwards Mfg. Co., Cincinnati, Ohio
Mesker Brothers, St. Louis, Mo.
SASH—STORM

Edwards Mfg. Co., Cincinnati, Ohio Mesker Brothers, St. Louis, Mo.

SASH—STORM
Carr, Adams & Collier Co., Dubuque, Iowa Curtis Companies, Inc., Clinton, Iowa Detroit Steel Products Co., Detroit, Mich. Farley & Loetscher Mfg. Co., Dubuque, Iowa Gabriel Steel Co., Detroit, Mich. Huttig Mfg. Co., Muscatine, Iowa Mesker Brothers, St. Louis, Mo.
National Door Mfrs. Assn., Chicago—See page 224

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-Steel Products Co., Muskegon, Mich. Weyerhaeuser Sales Co., St. Paul, Minn.

SASH—WINDOW—
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SASH BALANCES—
See Balances, Sash
SASH CHAINS
See Chains, Sash
SASH CORD—
See Cord, Sash
SASH CUTTERS—
See Cutters, Sash

SASH HOLDERS— See Holders, Sash SASH LIFTS— See Hardware, Sash SASH LOCKS— See Locks, Sash SASH OPERATORS

See Hardware, Sash
SASH LOCKS—
See Locks, Sash
SASH OPERATORS—
See Operators, Sash
SASH PULLEYS—
See Pulleys, Sash
SAWMILL MACHINERY—
See Machinery
SAWS—BAND
American Saw Mill Machinery Co., Hackettatown, N.J.
Consolidated Machinery & Supply Co., Log
Angeles, Calif.
Delta Mfg. Co., Chicago
DeWalt Products Corp., Lancaster, Pa.
Master Woodworker Mfg. Co., Detroit, Mich
Parks Woodworking Machine Co., Cincinnati, Ohio
Walker-Turner Co., Plainfield, N.J.
J. D. Wallace & Co., Chicago
SAWS—CHAIN (Power-Driven)
Mall Tool Co., Chicago
SAWS—CRULAR
American Saw Mill Machinery Co., Hackettstown, N.J.
Consolidated Machinery & Supply Co., Log
Angeles, Calif.
Construction Machinery Co., Waterloo, Iowa
Delta Mfg. Co., Chicago
DeWalt Products Corp., Lancaster, Pa.
Master Woodworker Mfg. Co., Detroit, Mich.
Parks Woodworking Machine Co., Cincinnati, Ohio
Walker-Turner Co., Plainfield, N.J.
J. D. Wallace & Co., Chicago
SAWS—DRAG
American Saw Mill Machinery Co., Hackettstown, N.J.
SAWS—GANG
American Saw Mill Machinery Co., Hackettstown, N.J.
DeWalt Products Corp., Lancaster, Pa.
SAWS—GANG
American Saw Mill Machinery Co., Hackettstown, N.J.
DeWalt Products Corp., Lancaster, Pa.
SAWS—GROOVING
American Saw Mill Machinery Co., Hackettstown, N.J.
Mall Tool Co., Chicago
SAWS—HAND
Consolidated Machinery & Supply Co., Los
Angeles, Calif.
Mall Tool Co., Chicago
Stanley Tools, New Britain, Conn.
SAWS—JIG
Walker-Turner Co., Plainfield, N.J.
SAWS—JIG
Walker-Turner Co., Plainfield, N.J.
SAWS—HAND
Consolidated Machinery & Supply Co., Los
Angeles, Calif.
Carter Division, New Britain, Conn.
Clarke Sanding Machine Co., Toledo, Ohio
American Floor Surfacing Machine Co., Toledo, Ohio
American Saw Mill Machinery & Supply Co., Los
Angeles, Calif.
Construction Machinery & Supply Co., Los
Angeles, Calif.
Construction Machinery Co., Waterloo, Iowa
DeWalt Products Corp., Lancaster, Pa.
Mall Tool Co., Chicago
Saus—Portable (Ciccro, Ill.
Stanley Electric Tool Division, New Britain,
Ohio
Porter-Cable Machinery Co., Ciccro, Ill.
Stanley Electric Tool Div

Ohio Porter-Cable Machine Co., Syracuse, N.Y. Skilsaw, Inc., Chicago Speedway Mfg. Co., Cicero, Ill. Stanley Electric Tool Division, New Britain. Conn.

Conn.
Syntron Co., Homer City, Pa.
Syracuse Guild Tool Co.
—See adv. this page



SYRACUSE GUILDTOOL COMPANY 1741-14 N. Salina St., Syracuse, N. Y.

Walker-Turner Co., Plainfield, N.J.
J. D. Walkae & Co., Chicago
Fred W. Wappat, Pittsburgh, Pa.
SAWS—PORTABLE (Pneumatic)
Mall Tool Co., Chicago
Skilsaw, Inc., Chicago
Skilsaw, Inc., Chicago
SAWS—RADIAL
Consolidated Machinery & Supply Co., Los
Angeles, Calif.
Walker-Turner Co., Inc., Plainfield, N.J.
SAWS—SWING
American Saw Mill Machinery Co., Hackettstown, N.J.
Consolidated Machinery & Supply Co., Los
Angeles, Calif.
DeWalt Products Corp., Lancaster, Pa.
Parks Woodworking Machine Co., Cincinnati,
Ohio
Porter-Cable Machine Co., Syracuse, N.Y.

Ohio
Porter-Cable Machine Co., Syracuse, N.Y.
SAW ARBORS—
See Arbors, Saw

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SAW BENCHES SAW BENCHES—
See Saw Rigs
SAW FILERS—
See Filers, Saw
SAW GUARDS—
See Guards, Saw
SAW HORSE TRESTLES—

SAW GUARDS—
See Guards, Saw
SAW HORSE TRESTLES—
See Trestles
SAW RETOOTHERS—
See Retoothers, Saw
SAW RIGS
American Saw Mill Machinery Co., Hackettstown, N.J.
Consolidated Machinery & Supply Co., Los
Angeles, Calif.
DeWalt Products Corp., Lancaster, Pa.
Walker-Turner Co., Plainfield, N.J.
SAW SETS—
See Sets, Saw
SAW SAW SETS—
See Saws
SAW TABLES
American Saw Mill Machinery Co., Hackettstown, N.J.
Consolidated Machinery & Supply Co., Los
Angeles, Calif.
Construction Machinery & Supply Co., Los
Angeles, Calif.
Construction Machinery Co., Waterloo, Iowa
DeWalt Products Corp., Lancaster, Pa.
Mall Tool Co., Chicago
Master Woodworker Mfg. Co., Detroit, Mich.
Walker-Turner Co., Plainfield, N.J.
SAW VISES—
See Vises, Saw
SCAFFOLDS—STEEL
Ajax Building Bracket Co., Cleveland
Heights, Ohio
Steel Scaffolding Co., Evansville, Ind.
Wagner Mfg. Co., Cedar Falls, Iowa
SCAFFOLD BRACKETS—
See Brackets, Scaffold
SCALES—DRAFTSMEN'S—
See Instruments, Drawing
SCHOOLS—CORRESPONDENCE
Chicago Technical College, Chicago
SCRAPERS—FLOOR AND WALL
Landon P. Smith, Inc., Irvington, N.J.
SCREEDS—BASE
Bradley Lbr. Co. of Arkansas, Warren, Ark.
Exchange Sawmills Sales Co., Kansas City,
Mo.

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SCREEDS—BASE
Bradley Lbr. Co. of Arkansas, Warren, Ark.
Exchange Sawmills Sales Co., Kansas City,
Mo.
Frost Lumber Industries, Inc., Shreveport,
La.
Johns-Manville, New York
Knapp Bros. Mfg. Co., Joliet, Ill.
Milcor Steel Co., Milwaukee, Wis.
Perfection Oak Flooring Co., Shreveport, La.
U. S. Gypsum Co., Chicago
SCREENS—PORCH
Curtis Companies, Inc., Clinton, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa
SCREENS—SAND AND GRAVEL
Reynolds Wire Co., Dixon, Ill.
SCREENS—WINDOW AND DOOR
W. J. Dennis & Co., Chicago
Carr, Adams & Collier Co., Dubuque, Iowa
Curtis Companies, Inc., Clinton, Iowa
Detroit Steel Products Co., Detroit, Mich.
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Gabriel Steel Co., Detroit, Mich.
Mesker Brothers, St. Louis, Mo.
National Door Mfrs. Assn., Chicago
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Vento Steel Products Co., Muskegon, Mich.
SCREEN CLOTH—
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SCREEN DOORS—
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SCREEN DOOR CHECKS—
See Checks, Door
SCREEN DOOR SETS—
See Hardware, Screen Door
SCREEN DOOR SETS—
See Hardware, Screen
SCREEN HANGERS—
See Hardware, Screen
SCREEN Tools, New Britain, Conn.
SCREWDRIVERS
Stanley Tools, New Britain, Conn.
SCREWDRIVERS—
SCREEN Co., Towson Md.

SCREWDRIVERS
Stanley Tools, New Britain, Conn.
SCREWDRIVERS—ELECTRIC
Black & Decker Mfg. Co., Towson, Md.
R. L. Carter Division, New Britain, Conn.
Mall Tool Co., Chicago
Stanley Electric Tool Division, New Britain,
Conn.

Stanley Electric Tool Division, New Britain,
Conn.
SCREWDRIVER BITS—
See Bits, Screwdriver
SCUTTLES—ROOF
Bilco Mfg. Co., New Haven, Conn.
SEALERS—
See also Fillers, Wood
I. F. Laucks, Inc., Seattle, Wash.
Wilbur & Williams Co., Boston, Mass.
SEATS—CLOSET
American Radiator & Standard Sanitary
Corp., Pittsburgh, Pa.
Crane Co., Cord City. Pa.
SEPTIC TANKS—
See Tanks, Septic
SERVICES—PLAN—
See Home Designs, Plans and Suggestions

See Home Designs, Plans and Sug gestions
SETS—CELLAR WINDOW
Frantz Mfg. Co., Sterling, Ill.
Majestic Co., Huntington, Ind.
McKinney Mfg. Co., Pittsburgh, Pa.
National Mfg. Co., Sterling, Ill.
Stanley Works, New Britain, Conn.
SETS—NAIL.
SETS—NAIL.
SETS—SAW
Foley Mfg. Co., Minneapolis, Minn.
SETS—SAW
Foley Mfg. Co., Minneapolis, Conn.
SEMAGE DISPOSAL PLANTS
Aluminum Co. of America, Pittsburgh, Pa.

Crane Co., Chicago L. Sonneborn Sons, Inc., New York SEWER PIPE—

Crane Co., Chicago
L. Sonneborn Sons, Inc., New York
SEWER PIPE—
See Pipe, Sewer
SEWER PIPE MACHINES—CEMENT—
See Machines, Sewer Pipe
SEWER PIPE MOLDS—
See Forms and Molds
SEWER PIPE STRAINERS—
See Strainers, Sewer Pipe
SHAKES—
See Roofing
SHAPERS—WOOD—
See Machines, Shaping
SHAPERS—WOOD—
See Machines, Shaping
SHAPENERS—LAWN MOWER
Foley Mfg. Co., Minneapolis, Minn.
SHARPENERS—SAW—
See Grinders, Saw
SHEATHING—
See Boards, Sheathing
SHEATHING PAPER—
See Paper, Roofing and Sheathing
SHEATHING PAPER—
See Paper, Roofing and Sheathing
SHEETS—ALUMINUM
Aluminum Co. of America, Pittsburgh, Pa.
SHEETS—BRASS AND COPPER
American Brass Co., New York
SHEETS—BRASS AND COPPER
American Brass Co., New York
SISAlkraft Co., Chicago
SHEETS—COPPER ALLOY
American Brass Co., New York
Carnegie-Illinois Steel Corp., Pittsburgh, Pa.
Milcor Steel Co., Milwaukee, Wis.
Tennessee Coal, Iron and R. R. Co., Birmingham, Ala.
SHEETS—GALVANIZED
American Rolling Mill Co., Middletown, Ohio
Bethlehem Steel Co., Bethlehem, Pa.
Carnegie-Illinois Steel Corp., Pittsburgh, Pa.
Edwards Mfg. Co., Cincinnati, Ohio
Mid-States Steel & Wire Co., Crawfordsville,
Ind.
Milcor Steel Co., Milwaukee, Wis.
Tennessee Coal, Iron & R. R. Co., BirmingEdwards Mfg. Co., Cincinnati, Ohio
Mid-States Steel & Wire Co., Crawfordsville,
Ind.
Milcor Steel Co., Milwaukee, Wis.
Tennessee Coal, Iron & R. R. Co., BirmingTennessee Coal, Iron & R. R. Co., Birming-

Ind.
Milcor Steel Co., Milwaukee, Wis.
Tennessee Coal, Iron & R.R. Co., Birmingham, Ala.
SHETS—IRON AND STEEL
American Rolling Mill Co., Middletown, Ohio Bethlehem Steel Co., Bethlehem, Pa.
Carnegie-Illinois Steel Corp., Pittsburgh, Pa.
Edwards Mfg. Co., Cincinnati, Ohio Milcor Steel Co., Milwaukee, Wis.
Tennessee Coal, Iron & R. R. Co., Birmingham, Ala.
SHEETS—LEAD
National Lead Co., New York
SHEETS—LEAD
American Brass Co., New York
American Rolling Mill Co., Middletown, Ohio Carnegie-Illinois Steel Corp., Pittsburgh, Pa.
SHEETS—STAINLESS STEEL
American Rolling Mill Co., Middletown, Ohio SHEETS—STAINLESS STEEL
American Rolling Mill Co., Middletown, Ohio SHEETS—STAINLESS STEEL
American Rolling Mill Co., Middletown, Ohio SHEETS—STAINLESS STEEL
American Rolling Mill Co., Bethlehem, Pa.
Carnegie-Illinois Steel Corp., Pittsburgh, Pa.
Edwards Mfg. Co., Cincinnati, Ohio Milcor Steel Co., Milwaukee, Wis.
National Lead Co., New York
Tennessee Coal, Iron & R. R. Co., Birmingham, Ala.
SHELF BRACKETS—See Brackets, Shelf
SHIELDS—TERMITE
Timber Engineering Co., Washington, D.C.
SHINGLES—See Roofing
SHINGLE NAILS—See Nails, Roofing
SHINGLE STAINS—See Stains, Shingle
SHINGLE STAINS—See Stains, Shingle
SHINGLE STAINS—See Brackets, Shingling
SHOWER BATHS—See Baths, Shower
SHOWER BATHS—See Baths, Shower
SHOWER STALLS—See Stails, Shower
SHOWER STALLS

Celotex Corp., Chicago
Certain-teed Products Corp., New York
Flintkote Co., New York
Flintkote Co., New York
Ford Roofing Products Co., Chicago
Johns-Manville, New York
B. F. Nelson Mfg. Co., Minneapolis, Minn.
Ruberoid Co., New York
Texas Co., New York
Texas Co., New York
U. S. Gypsum Co., Chicago
SIDING—IMITATION BRICK
Barrett Co., New York
Flintkote Co., New York
SIDING—IMITATION BRICK
Barrett Co., New York
SIDING—INSULATING
Homasote Co., Trenton, N.J.
SIDING—METAL
Milcor Steel Co., Milwaukee, Wis.
SIDING—ZINC AND COPPER
Milcor Steel Co., Milwaukee, Wis.
SIDING CLIPS—
See Clips, Siding
SIDING STAYS—
See Stays, Siding
SIGHTS—LEVEL
Bostrom-Brady Mfg. Co., Atlanta, Ga.
Stanley Tools, New Britain, Conn.
David White Co., Milwaukee, Wis.
SILLS—WINDOW
Aluminum Co. of America, Pittsburgh, Pa.
Bradley Lbr. Co. of Arkansas, Warren, Ark.
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Florida Louisiana Red Cypress Co., Jacksonville, Fla.
Frost Lumber Industries, Inc., Shreveport, La.
Weyerhaeuser Sales Co., St. Paul, Minn.

SILOS—WOOD
California Redwood Distributors, Ltd., Chicago
Weyerhaeuser Sales Co., St. Paul, Minn.
SILO DOORS—
See Doors, Silo
SILO MOLDS—
See Forms and Molds
SINKS—KITCHEN
American Radiator & Standard Sanitary.
Corp., Pittsburgh, Pa.
Crane Co., Chicago
Edison General Electric Appliance Co., Chicago

Edison General Electric Appliance Co., Chicago
Eljer Co., Ford City, Pa.
Farley & Loetscher Mfg. Co., Dubuque, Iowa General Electric Co., Appl. & Merch. Dept..
Bridgeport, Conn.
Kitchen Maid Corp., Andrews, Ind.
Kohler Co., Kohler, Wis.
Tracy Mfg. Co., Pittsburgh, Pa.
Youngstown Pressed Steel Div., Warren.
Ohio
SINKS—SERVICE, WASH, etc.
Eljer Co., Ford City, Pa.
Kohler Co., Kohler, Wis.
SITZ BATHS—
See Baths, Sitz
SIZING
I. F. Laucks, Inc., Seattle, Wash.

See Baths, Sitz
SIZING
I. F. Laucks, Inc., Seattle, Wash.
SKYLIGHTS
Aluminum Co. of America, Pittsburgh, Pa.
Edwards Mfg. Co., Cincinnati, Ohio
Milcor Steel Co., Milwaukee, Wis.
SKYLIGHT GUARDS—
See Guards, Skylight
SLIDING DOORS—
See Doors, Sliding
SLIDING DOOR TRACK—
See Track, Sliding Door
SLIDING PARTITION HANGERS—
See Hangers
SNOW GUARDS—
See Guards, Snow
SOCKETS—ELECTRIC
General Electric Co., Appl. & Merch. Dept.,
Bridgeport, Conn.
National Electric Products Corp., Pittsburgh,
Pa.
SOCTENERS—WATER

General Electric Co., Appl. & Merch. Dept., Bridgeport, Conn.
National Electric Products Corp., Pittsburgh. Pa.
SOFTENERS—WATER
Crane Co., Chicago
U. S. Gypsum Co., Chicago
SOLDER
National Lead Co., New York
SOLDERING IRONS—
See Irons, Soldering
SPOUTING—CONCRETE
Construction Machinery Co., Waterloo, Iowa
SPRINGS—DOOR
Frantz Mfg. Co., Sterling, Ill.
National Mfg. Co., Sterling, Ill.
National Mfg. Co., Sterling, Ill.
Overhead Door Corp., Hartford City, Ind.
Wagner Mfg. Co., Cedar Falls, Iowa
SPRING HINGES—
See Hinges, Spring
SQUARES—BEVEL
Stanley Tools, New Britain, Conn.
SQUARES—COMBINATION
Stanley Tools, New Britain, Conn.
SQUARES—STEEL
—Manual of Instruction for Use of
Dayton Rogers Mfg. Co., Minneapolis, Minn.
SQUARES—TT"—
See Instruments, Drawing
SQUARES—TRY AND MITRE
Stanley Tools, New Britain, Conn.
STAINS—CEMENT
Carr, Adams & Collier Co., Dubuque, Iowa
Pecora Paint Co., Philadelphia, Pa.
L. Sonneborn Sons, Inc., New York
STAINS—SHINGLE
Barrett Co., New York
Breinig Bros., Hoboken, N.J.
Calbar Paint & Varnish Co., Philadelphia, Pa.
Lowe Brothers Co., Dayton, Ohlo
Pittsburgh Plate Glass Co., Pittsburgh, Pa.
Protection Products Mfg. Co., Kalamazoo,
Mich. (Continued on next page)

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L. Sonneborn Sons, Inc., New York
Weyerhaeuser Sales Co., St. Paul, Minn.
STAINS—WOOD
Barrett Co., New York
Breinig Bros., Hoboken, N.J.
Carr, Adams & Collier Co., Dubuque, Iowa
Lowe Brothers Co., Dayton, Ohio
Pittsburgh Plate Glass Co., Pittsburgh, Pa.
L. Sonneborn Sons, Inc., New York
Weyerhaeuser Sales Co., St. Paul, Minn.
STAIRS—DISAPPEARING
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Marschke Co., St. Paul, Minn.
STAIRS—MOVABLE
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Marschke Co., St. Paul, Minn.
STAIRS—MOVABLE
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Marschke Co., St. Paul, Minn.
STAIRS—STEEL
Cincinnati Iron Fence Co., Cincinnati, Ohio
Mesker Brothers, St. Louis, Mo.
STAIRS—WOOD
Bradley Lbr. Co. of Arkansas, Warren, Ark.
Carr, Adams & Collier Co., Dubuque, Iowa
Curtis Companies, Inc., Clinton, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Weyerhaeuser Sales Co., St. Paul, Minn.
STAILS—SHOWER
Crane Co., Chicago
Kohler Co., Kohler, Wis.
Tylac Co., Monticello, Ill.
Henry Weis Mfg. Co., Elkhart, Ind.
STALLS—TOILET
Crane Co., Chicago
Libbey-Owens-Ford Glass Co., Toledo, Ohio
Henry Weis Mfg. Co., Elkhart, Ind.
STALLS—URINAL
American Radiator & Standard Sanitary
Corp., Pittsburgh, Pa.
Crane Co., Chicago
Eljer Co., Ford City, Pa.
Kohler Co., Kohler, Wis.
STANCHIONS—CATLE
Weyerhaeuser Sales Co., St. Paul, Minn.
STAPLES—
See Machines, Tacking and Stapling
STAPLES—
See Machines, Tacking and Stapling
STAPLES—(For Stapling Machines)
A. L. Hansen Mfg. Co., Chicago
STAYS—SIDING
W. H. Maze Co., Peru, Ill.
STEAM HEATING PLANTS—
See Heating Plants, Steam
STEEL—FABRICATED
Allegheny Ludlum Steel Corp., Pittsburgh,
Pa.
Bethlehem Steel Co., Milwaukee, Wis. Allegheny Ludlum Steel Corp., Pittsburgh, Pa.
Bethlehem Steel Co., Bethlehem, Pa.
Edwards Mfg. Co., Cincinnati, Ohio
Sterling Wheelbarrow Co., Milwaukee, Wis.
STEEL—STRUCTURAL
Bethlehem Steel Co., Bethlehem, Pa.
Carnegie-Illinois Steel Corp., Pittsburgh, Pa.
International Steel Co.—See adv. this page
Tennessee Coal, Iron & R.R. Co., Birmingham, Ala.
STEEL DOORS—
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STEEL GRATINGS—
See Gratings. Steel
STEEL GRATINGS—
See Gratings. Steel
STEEL PRODUCTS—
Protective Process for
Parker Rust Proof Co., Detroit, Mich.
STEEL SASH VENTILATORS—
See Ventilators, Steel Sash
STEEL SQUARES—
See Squares, Steel
STEEL SQUARES—
See Squares, Steel
STEEL STES—MANHOLE
Donley Brothers Co., Cleveland, Ohio STEPS—MANHOLE
Donley Brothers Co., Cleveland, Ohio
STOCK—DIMENSION
Arkansas Soft Pine Bureau, Little Rock, Ark.
—See page 224
Bradley Lbr. Co. of Arkansas, Warren, Ark.
Exchange Sawmills Sales Co., Kansas City. —See page 224
Bradley Lbr. Co. of Arkansas, Warren, Ark. Exchange Sawmills Sales Co., Kansas City. Mo.
Florida Louisiana Red Cypress Co., Jacksonville, Fla.
Frost Lumber Industries, Inc., Shreveport, La. Perfection Oak Flooring Co., Shreveport, La. Shevlin Pine Sales Co., Minneapolis, Minn. Smith Lumber Co., Red Bay, Ala.
W. T. Smith Lumber Co., Chapman, Ala. Southern Pine Lbr. Co., Texarkana, Tex. Urania Lumber Co., Urania, La.
Western Pine Assn., Portland, Ore.
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Weyerhaeuser Sales Co., St. Paul, Minn. STOCK—TANK
Edwards Mfg. Co., Cincinnati, Ohio Florida Louisiana Red Cypress Co., Jacksonville, Fla.
Milcor Steel Co., Milwaukee, Wis.
STOCK TANKS
Edwards Mfg. Co., Cincinnati, Ohio Harbor Plywood Corp., Hoquiam, Wash. Weyerhaeuser Sales Co., St. Paul, Minn. STOKERS—COAL
Crane Co., Chicago
Iron Fireman Mfg. Co., Portland, Ore. Round Oak Co., Dowagiac, Mich.
STONE—BUILDING, FACING
R. M. Edgar Quarry—See adv. this page STOPS—BENCH
Stanley Tools. New Britain, Conn.
STOPS—DOOR
Allith-Prouty, Inc., Danville, Ill.
Bradley Lbr. Co. of Arkansas, Warren, Ark. Coburn Trolley Track Co., Holyoke, Mass. Curtis Companies, Inc., Clinton, Iowa Farley & Loetscher Mfg. Co., Dubuque, Iowa Frantz Mfg. Co., Sterling, Ill.
H. B. Ives Co., New Haven, Conn.
Knape & Vogt Mfg. Co., Grand Rapids, Mich. McKinney Mfg. Co., Pittsburgh, Pa.

Perfection Oak Flooring Co., Shreveport, La. Stanley Works, New Britain, Conn. Wagner Mfg. Co., Cedar Falls, Iowa Weyerhaeuser Sales Co., St. Paul, Minn. Stanley Works, New Britain, Conn.
Wagner Mfg. Co., Cedar Falls, Iowa
Weyerhaeuser Sales Co., St. Paul, Minn.

STORE FRONTS—
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STORM DOORS—
See Doors, Storm
STORM DOOR CHECKS—
See Checks, Door
STORM SASH—
See Sash, Storm
STORM SASH—
See Sash, Storm
STORM SASH—
See Hardware, Storm Sash
STOVES—COAL—
See Ranges, Coal
STOVES—COAL—
See Ranges, Gas
STOVES—GAS—
See Ranges, Gas
STOVE PIPE—
See Pipe, Stove
STRAIGHT EDGES
Armstrong Cork Co., Lancaster, Pa.
Jaeger Machine Co., Columbus, Ohio
David White Co., Milwaukee, Wis.
STRAINERS—SEWER PIPE
Donley Brothers Co., Cleveland, Ohio
Majestic Co., Huntington, Ind.
STRAP HINGES—
See Hinges, Strap
STRETCHERS—WIRE
A. Markwell Mfg. Co., New York
SURFACE HINGES—
See Hinges, Surface
STRUCTURAL STEEL—
See Steel, Structural
STUCCO
Certain-teed Products Corp., New York
Johns-Manville, New York
Louisville Cement Co., Cleveland, Ohio
Ohio Hydrate & Supply Co., Woodville, Ohio
U. S. Gypsum Co., Chicago
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Flintkote Co., New York
Louisville Cement Co., Louisville, Ky.
Medusa Portland Cement Co., Cleveland, Ohio
Ohio Hydrate & Supply Co., Woodville, Ohio
Woodville Lime Products Co., Toledo, Ohio
STUCCO BASE—

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STUCCO COLORS—
See Colors, Stucco
STUCCO MACHINES—
See Machines, Stucco
STUCCO PAINTS—
See Paints, Cement and Stucco
STUCCO REINFORCING—
See Reinforcing, Concrete and Stucco STUDS—STEEL
Milcor Steel Co., Milwaukee, Wis.
U. S. Gypsum Co., Chicago
SUPPORTS—BATH TUB
Wm. B. Lucke, Inc., Wilmette, Ill.
SUN DIALS SUN DIALS
Colorcrete Industries, Inc., Holland, Mich.
Majestic Co., Huntington, Ind.
SURFACE BOLTS—
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SURFACE HINGES—
See Hinges, Surface
SURVEYING INSTRUMENTS—
See Instruments Surveying SURVEYING INSTRUMENTS—
See Instruments, Surveying
SUSPENDED CEILINGS—
See Ceilings, Suspended
SWAGES—SAW
American Saw Mill Machinery Co., Hackettstown, N.J.
Foley Mfg. Co., Minneapolis, Minn.
SWITCHBOARDS—ELECTRIC
Frank Adam Electric Co., St. Louis, Mo.
Square D Co., Detroit, Mich.

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Columbus, Ohio

SWITCH BOXES—
See Boxes, Switch
SWITCH PLATES—
See Plates, Switch
SWITCHES—ELECTRIC
Frank Adam Electric Co., St. Louis, Mo.
General Electric Co., Appl. & Merch. Dept.,
Bridgeport, Conn.
Square D Co., Detroit, Mich.
"T" SQUARES—
See Instruments, Drawing
TABLES—DRAFTING—
See Furniture, Drafting Room

American Builder, April 1941. TABLES—SAW—
See Saw Tables
TACKERS—
See Machines, Tacking and Stapling
TACKS (For Tacking Machines)
A. L. Hansen Mfg. Co., Chicago
TAMPERS—CONCRETE (Hand)—
See Tools, Cement Workers
TAMPERS—CONCRETE (Machine)
See Machines, Tamping
TANKS—CLOSET
American Radiator & Standard Sanitary
Corp., Pittsburgh, Pa.
W. A. Case & Son Mfg. Co., Buffalo, N.Y.
Crane Co., Chicago
Eljer Co., Ford City, Pa.
Kohler Co., Kohler, Wis.
TANKS—GRAIN Kohler Co., Kohler, Wis.

TANKS—GRAIN

Weyerhaeuser Sales Co., St. Paul, Minn.
TANKS—HOT WATER STORAGE

Crane Co., Chicago
TANKS—SEPTIC

Crane Co., Chicago
Donley Brothers Co., Cleveland, Ohio
TANKS—STEEL AND IRON

W. A. Case & Son Mfg. Co., Buffalo, N.Y.

Crane Co., Chicago
Edwards Mfg. Co., Cincinnati, Ohio
TANKS—STOCK—
See Stock Tanks
TANKS—WOOD

California Redwood Distributors, Ltd., Chicago

California Redwood Distributors, Ltd., Chicago
Florida Louisiana Red Cypress Co., Jacksonville, Fla.
Weyerhaeuser Sales Co.
TANKS—WATER
W. A. Case & Son Mfg. Co., Buffalo, N.Y.
Crane Co., Chicago
Edwards Mfg. Co., Cincinnati, Ohio
TANK FITTINGS—
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TANK HEATERS—
See Heaters, Tank
TAPES—MEASURING
Warren-Knight Co., Philadelphia, Pa.
TARRED FELTS—
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TELEPHONE SERVICE
American Telephone & Telegraph Co., New York

merican Telephone & Telegraph Co.,
York
TELEPHONE WIRING—
See Wiring, Telephone
TEMPERATURE REGULATORS—
See Thermostats
TENONERS

TEMPERATURE REGULATORS—
See Thermostats
TENONERS

DeWalt Products Corp, Lancaster, Pa.
Walker-Turner Co., Plainfield, N.J.
TERMITE CONTROL
American Lumber & Treating Co., Chicago
E. L. Bruce Co., Memphis, Tenn.
TERMITE SHIELDS—
See Shields, Termite
TERRAZZO RUBBING MACHINES—
See Machines, Terrazzo Rubbing
THERMOSTATS
American Radiator & Standard Sanitary
Corp., Pittsburgh, Pa.
Barber-Colman Co., Rockford, Ill.
Crane Co., Chicago
Hotstream Heater Co., Cleveland, Ohio
Norge Heating & Conditioning Division, Detroit, Mich.
THIMBLES—CHIMNEY
Donley Brothers Co., Cleveland, Ohio
F. D. Kees Mfg. Co., Beatrice, Nebr.
Majestic Co., Huntington, Ind.
Milcor Steel Co., Milwaukee, Wis.
THRESHOLDS—METAL
Allmetal Weatherstrip Co., Chicago
Aluminum Co. of America, Pittsburgh, Pa.
American Brass Co., New York
W. J. Dennis & Co., Cincinnati, Ohio
Majestic Co., Huntington, Ind.
Master Metal Strip Service, Inc., Chicago
Wilson Metal Products Co., Columbus, Ohio
Wooster Products, Inc., Wooster, Ohio
THRESHOLDS—WOOD
Bradley Lbr. Co., of Arkansas, Warren, Ark.
Curtis Companies, Inc., Clinton, Iowa
Exchange Sawmills Sales Co., LacksonFlorida Louisiana Red Corpess Co., Jackson-

Curtis Companies, Inc., Clinton, Iowa Exchange Sawmills Sales Co., Kansas City, Mo.
Farley & Loetscher Mfg. Co., Dubuque, Iowa Florida Louisiana Red Cypress Co., Jacksonville, Fla.
Frost Lumber Industries, Inc., Shreveport, La. Perfection Oak Flooring Co., Shreveport, La. Southern Pine Lbr. Co., Texarkana, Tex. Weyerhaeuser Sales Co., St. Paul, Minn.

TIES—WALL
Donley Brothers Co., Cleveland, Ohio Edwards Mfg. Co., Cincinnati, Ohio F. D. Kees Mfg. Co., Beatrice, Nebr. Milcor Steel Co., Milwaukee, Wis.
U. S. Gypsum Co., Chicago
TILE—ASBESTOS
Johns-Manville, New York
Ruberoid Co., New York
Ruberoid Co., New York
Tile-Tex Co., Chicago Heights, Ill.

TILE—ASPHALT
Armstrong Cork Co., Lancaster, Pa.
Tylac Co., Monticello, Ill.

TILE—FIBRE
Celotex Corp., Chicago
Certain-teed Products Corp., New York
Fir-Tex Insulating Board Co., Portland, Ore.
Flintkote Co., New York
Gibbs Boardtile Corp., Chicago
Insulte Co., Minneapolis, Minn.
Johns-Manville, New York
Marsh Wall Products, Inc., Dover, Ohio

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> F. Lowe Ohio Bostr Mall

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Jaeger Allith-Coburn Frantz Knape McKini Nations Stanley Wagne

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Masonite Corp., Chicago
National Gypsum Co., Buffalo, N.Y.
Traco Division, Atlanta, Ga.
Tylac Co., Monticello, Ill.
Upson Co., Lockport, N.Y.
U. S. Gypsum Co., Chicago
Wood Conversion Co., St. Paul, Minn.
TILE—FIREPROOF
Johns-Manville, New York
U. S. Gypsum Co., Chicago
TILE—FLOOR AND WALL
Allegheny Ludlum Steel Corp., Pittsburgh,
Pa.

TRAMMELS
Warren-Knight Co., Philadelphia, Pa.
TRANSITS
Bostrom-Brady Mfg. Co., Atlanta, Ga.
Warren-Knight Co., Philadelphia, Pa.
David White Co., Milwaukee, Wis.
TRANSOM CHAINS—
See Chains, Transom
TRANSOM HARDWARE—
See Hardware
TRANSOM VENTILATORS—
See Ventilators, Transom
TRAPS—CESSPOOL
Crane Co., Chicago
Donley Brothers Co., Cleveland, Ohio
Majestic Co., Huntington, Ind.
TRAPS—GREASE
Donley Brothers Co., Cleveland, Ohio

Donley Brothers Co., Cleveland, Ohio Majestic Co., Huntington, Ind.

TRAPS—GREASE
Donley Brothers Co., Cleveland, Ohio TRAPS—RADIATOR
Crane Co., Chicago
TRAPS—STEAM
Crane Co., Chicago
TRAYS—LAUNDRY
American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
Crane Co., Chicago
Eljer Co., Ford City, Pa.
Kohler Co., Kohler, Wis.

TREADS—STAIR
Allmetal Weatherstrip Co., Chicago
B & T Floor Co., Columbus, Ohio
Bradley Lbr. Co. of Arkansas, Warren, Ark.
Carr. Adams & Collier Co., Dubuque, Iowa
Curtis Companies, Inc., Clinton, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Frost Lumber Industries, Inc., Shreveport, La.
Perfection Oak Flooring Co., Shreveport, La.
Perfection Oak Flooring Co., Shreveport, La.
Weyerhaeuser Sales Co., St. Paul, Minn.
Wooster Products, Inc., Wooster, Ohio
TRESTLES—STEEL
Steel Scaffolding Co., Evansville, Ind.
Wagner Mfg. Co., Cedar Falls, Iowa
TRIANGLES—
See Instruments, Drawing
TRIM—DOOR (Metal)
Aluminum Co. of America, Pittsburgh, Pa.
Knape & Vogt Mfg. Co., Grand Rapids, Mich.
Knapp Bros. Mfg. Co., Joliet, Ill.
Marsh Wall Products, Inc., Dover, Ohio
McKinney Mfg. Co., Milwaukee, Wis.
Wilson Metal Products Co., Columbus, Ohio
TRIM—DOOR (Wood)
Arkansas Soft Pine Bureau, Little Rock, Ark.

Wilson Metal Products Co., Columbus, Ohio

TRIM—DOOR (Wood)

Arkansas Soft Pine Bureau, Little Rock, Ark.

—See page 224

Bradley Lbr. Co. of Arkansas, Warren, Ark.
Carr, Adams & Collier Co., Dubuque, Iowa
Curtis Companies, Inc., Clinton, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Plorida Louisiana Red Cypress Co., Jacksonville, Fls.
Frost Lumber Industries, Inc., Shreveport, La.
Pacific Mutual Door Co., Tacoma, Wash.
Perfection Oak Flooring Co., Shreveport, La.
Ponderosa Pine Woodwork, Chicago

—See page 224

Trimpak Corp., New York
Western Pine Assn., Portland, Ore.

—See page 224

Weyerhaeuser Sales Co., St. Paul, Minn.

TRIM—INTERIOR (Metal)
Allegheny Ludlum Steel Corp., Pittsburgh,
Pa.

Allmetal Westerstrip Co., Chicago

Allegheny Ludlum Steel Corp., Pittsburgh, Pa.
Allmetal Weatherstrip Co., Chicago
Aluminum Co. of America, Pittsburgh, Pa.
American Brass Co., New York
American Rolling Mill Co., Middletown, Ohio
B & T Floor Co., Columbus, Ohio
Philip Carey Co., Lockland, Cincinnati, Ohio
Knapp Bros. Mfg. Co., Joliet, Ill.
Libbey-Owens-Ford Glass Co., Toledo, Ohio
Marsh Wall Products, Inc., Dover, Ohio
Masonite Corp., Chicago
Milcor Steel Co., Milwaukee, Wis.
Wilson Metal Products Co., Columbus, Ohio
Wooster Products, Inc., Wooster, Ohio
TRIM—INTERIOR (Tile)
Davidson Enamel Co., Clyde, Ohio
Marsh Wall Products, Inc., Dover, Ohio
Tylac Co., Monticello, Ill.
TRIM—INTERIOR (Wood)

Marsh Wall Products, Inc., Dover, Ohio Tylac Co., Monticello, Ill.

TRIM—INTERIOR (Wood)
Arkansas Soft Pine Bureau, Little Rock, Ark.
—See page 224
Bradley Lbr. Co. of Arkansas, Warren, Ark. E. L. Bruce Co., Memphis, Tenn.
Carr. Adams & Collier Co., Dubuque, Iowa Curtis Companies, Inc., Clinton, Iowa Exchange Sawmills Sales Co., Kansas City, Mo.
Farley & Loetscher Mfg. Co., Dubuque, Iowa Florida Louisiana Red Cypress Co., Jacksonville, Fla.
Frost Lumber Industries, Inc., Shreveport, La. Marsh Wall Products, Inc., Dover, Ohio Perfection Oak Flooring Co., Shreveport, La. Walter G. Scrim, Los Angeles, Calif. Shevlin Pine Sales Co., Minneapolis, Minn. Southern Pine Lbr. Co., Texarkana, Tex.
Western Pine Assn., Portland, Ore.
—See page 224
Weyerhaeuser Sales Co., St. Paul, Minn.
Wood Conversion Co., St. Paul, Minn.
TRIM—WINDOW (Metal)
Aluminum Co. of America, Pittsburgh, Pa. Knapp Bros. Mfg. Co., Joliet, Ill.
Marsh Wall Products, Inc., Dover, Ohio Milcor Steel Co., Milwaukee, Wis.
TRIM—WINDOW (Wood)
Arkansas Soft Pine Bureau, Little Rock, Ark.

TRIM—WINDOW (Wood)
Arkansas Soft Pine Bureau, Little Rock, Ark.
—See page 224
Bradley Lbr. Co. of Arkansas, Warren, Ark.
California Redwood Distributors, Ltd., Chi-

Curtis Companies, Inc., Clinton, Iowa Exchange Sawmills Sales Co., Kansas City,

Mo.
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Florida Louisiana Red Cypress Co., Jacksonville, Fla.
Frost Lumber Industries, Inc., Shreveport, La.
Pacific Mutual Door Co., Tacoma, Wash.
Ponderosa Pine Woodwork, Chicago
—See page 224
Trimpak Corp., New York
Western Pine Assn., Portland, Ore.
—See page 224
Weyerhaeuser Sales Co., St. Paul, Minn.
TROLLEYS AND TRAMWAYS
Allith-Prouty, Inc., Danville, Ill.
Coburn Trolley Track Co., Holyoke, Mass.
Wagner Mfg. Co., Cedar Falls, Iowa
TRUCKS—HAND
Lansing Co., Lansing, Mich.
Sterling Wheelbarrow Co., Milwaukee, Wis.
TRUCKS—MOTOR
Chevrolet Motor Division, Detroit, Mich.
Ford Motor Co., Dearborn, Mich.
General Motors Truck & Coach Division,
Pontiac, Mich.
International Harvester Co., Chicago
Mack Mfg. Co., Long Island City, N.Y.
TRUSSES—ROOF (Wood)
Weyerhaeuser Sales Co., St. Paul, Minn.
TRY SND MITRE SQUARES—
See Squares, Try and Mitre
TUBS—BATH
American Radiator & Standard Sanitary
Corp., Pittsburgh, Pa.
Crane Co., Chicago
Eljer Co., Ford City, Pa.
Kohler Co., Kohler, Wis.
TUBS—LAUNDRY
American Radiator & Standard Sanitary
Corp., Pittsburgh, Pa.
Crane Co., Chicago
Eljer Co., Ford City, Pa.
Kohler Co., Kohler, Wis.
TUB HANGERS—
See Hangers, Bath Tub
UNBREAKABLE GLASS—
See Hangers, Bath Tub
UNBREAKABLE GLASS—
See Heaters, Unit
URINALS
American Radiator & Standard Sanitary
Corp., Pittsburgh, Pa.
Crane Co., Chicago
Eljer Co., Ford City, Pa.
Kohler Co., Kohler, Wis.
TUB HANGERS—
See Heaters, Unit
URINALS
American Radiator & Standard Sanitary
Corp., Pittsburgh, Pa.
Crane Co., Chicago
Eljer Co., Ford City, Pa.
Kohler Co., Kohler, Wis.

TUB HANGERS—
See Heaters, Unit
URINALS
American Radiator & Standard Sanitary
Corp., Pittsburgh, Pa.
Crane Co., Chicago
Eljer Co., Ford City, Pa.
Kohler Co., Kohler, Wis.

VALVES—RADIATOR
American Radiator & Standard Sanitary
Corp., Pittsburgh, Pa.
Crane Co., Chicago
Eljer Co., Ford City, Pa.
Kohler Co., Kohler, Wis.

VANDAR SYSTEM HEATING PLANTS—
See Heating Plants, Vapor
VARNISHES
Breinig Bros., Hoboken, N. J.
Calbar Paint & Varnish Co., Phila

VENETIAN BLINDS— See Blinds, Venetian VENTILATING GRILLES-See Grilles

VENTILATORS—KITCHEN

American Radiator & Standard Sanitary
Corp., Pittsburgh, Pa.
Crane Co., Chicago
General Electric Co., Appl. & Merch. Dept.,
Bridgeport, Conn.
Ilg Electric Ventilating Co., Chicago
Majestic Co., Huntington, Ind.
Shepler Mfg. Co., Pittsburgh, Pa.
Skuttle Sales Co., Detroit, Mich.
Victor Electric Products, Inc., Cincinnati,
Ohio

Ohio

VENTILATORS—ROOF

Donley Brothers Co., Cleveland, Ohio
Edwards Mfg. Co., Cincinnati, Ohio
Ig Electric Ventilating Co., Chicago
Johns-Manville, New York
Mileor Steel Co., Milwaukee, Wis.

VENTILATORS—STEEL SASH
Mesker Brothers, St. Louis, Mo.
Victor Electric Products, Inc., Cincinnati,
Ohio

VENTILATORS—TRANSOM
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Ilg Electric Ventilating Co., Chicago
Victor Electric Products, Inc., Cincinnati,
Ohio (Concluded on next page)

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VENTILATORS—WALL

Donley Brothers Co., Cleveland, Ohio
Ilg Electric Ventilating Co., Chicago
Majestic Co., Huntington, Ind.
Milcor Steel Co., Milwaukee, Wis.
Shepler Mfg. Co., Pittsburgh, Pa.
Skuttle Sales Co., Detroit, Mich.
Victor Electric Products, Inc., Cincinnati,
Ohio
Wooster Products Ohio
Wooster Products, Inc., Wooster, Ohio
VENTILATORS—WINDOW
Ilg Electric Ventilating Co., Chicago
Mesker Brothers, St. Louis, Mo.
Victor Electric Products, Inc., Cincinnati, Wooster Products, Inc., Wooster, Onto
VENTILATORS—WINDOW
Ilg Electric Ventilating Co., Chicago
Mesker Brothers, St. Louis, Mo.
Victor Electric Products, Inc., Cincinnati,
Ohio
VENTS—ROOF
Barrett Co., New York
VIALS—LEVEL
Bostrom-Brady Mfg. Co., Atlanta, Ga.
Warren-Knight Co., Philadelphia, Pa.
David White Co., Milwaukee, Wis.
VIBRATORS—CONCRETE—
See also Machines, Tamping
Mall Tool Co., Chicago
Syntron Co., Chicago
Syntron Co., Homer City, Pa.
VISES—BENCH
Crane Co., Chicago
Stanley Tools, New Britain, Conn.
WAINSCOTING—MARBLE (Artificial)
Gibbs Boardtile Corp., Chicago
Libbey-Owens-Ford Glass Co., Toledo, Ohio
Tile-Tex Co., Chicago Heights, Ill.
Tylac Co., Monticello, Ill.
WAINSCOTING—TILE
Celotex Corp., Chicago
Davidson Enamel Co., Clyde, Ohio
Gibbs Boardtile Corp., Chicago
Davidson Enamel Co., Buffalo, N.Y.
Tile-Tex Co., Chicago Heights, Ill.
Traco Division, Atlanta, Ga.
Tylac Co., Monticello, Ill.
WALL S—AREA
Majestic Co., Huntington, Ind.
WALL S—AREA
Majestic Co., Huntington, Ind.
WALL BOAES—
See Boards, Wall
WALL BOAES—
See Boards, Wall
WALL BRACKETS—
See Boxes, Wall
WALL BRACKETS—
See Boxes, Wall WALL VENTILATORS—
See Ventilators, Wall
WALL SIZE—
See Sizing
WARDROBE FIXTURES—
See Fixtures, Wardrobe
WARM AIR FURNACES—
See Heating Plants
WASHERS—LEAD
Deniston Co., Chicago
WASHSTANDS
American Radiator & Standard Sanitary
Corp., Pittsburgh, Pa.
W. A. Case & Son Mfg. Co., Buffalo, N.Y.
Crane Co., Chicago
WATER CLOSETS—
See Colsets, Water
WATER FILTERS—
See Filters, Water
WATER HEATERS—
See Heaters, Water
WATER MIXING VALVES—
See Valves, Water Mixing
WATER REGULATORS—
See Regulators, Water
WATER SUPPLY SYSTEMS
Crane Co., Chicago
WATER TANKS—
See Tanks, Water
WATER SUPPLY SYSTEMS
Crane Co., Chicago
WATER TANKS—
See Tanks, Water
WATERPROOFED STUCCO—
See Stucco, Waterproofed
WATERPROOFED STUCCO—
See Stucco, Waterproofed
WATERPROOFING—BRICK
American Fluresit Co., Cincinnati, Ohio
Barber Asphalt Corp., Barber, N. J.
Breinig Bros., Hoboken, N. J.
Calbar Paint & Varnish Co., Philadelphia, Pa.
Colorcrete Industries, Inc., Holland, Mich.
Flintkote Co., New York
Medusa Portland Cement Co., Cleveland, Ohio
Pecora Paint Co., Inc., Philadelphia, Pa.
Protection Products Mfg. Co., Kalamasoo,
Mich.
L. Sonneborn Sons, Inc., New York

WATERPROOFING—CEMENT
American Fluresit Co., Cincinnati, Ohio
Barber Asphalt Corp., Barber, N. J.
Barrett Co., New York
Breinig Bros., Hoboken, N. J.
Calbar Paint & Varnish Co., Philadelphia, Pa.
Colorcrete Industries, Inc., Holland, Mich.
Donley Brothers Co., Cleveland, Ohio
Flintkote Co., New York
Lone Star Cement Corp., New York
Marsh Wall Products, Inc., Dover, Ohio
Medusa Portland Cement Co., Cleveland, Ohio
Peccora Paint Co., Philadelphia, Pa.
Pittsburgh Plate Glass Co., Pittsburgh, Pa.
Protection Products Mfg. Co., Kalamazoo,
Mich. WATERPROOFING-Protection Products Mfg. Co., Kalamazoo, Mich.
Ruberoid Co., New York
L. Sonneborn Sons, Inc., New York
Texas Co., New York
WATERPROOFING—IRON
Barrett Co., New York
Calbar Paint & Varnish Co., Philadelphia, Pa.
Flintkote Co., New York
Protection Products Mfg. Co., Kalamazoo,

Calbar Paint & Varnish Co., Philadelphia, Pa. Flintkote Co., New York Protection Products Mfg. Co., Kalamazoo, Mich.

WATERPROOFING—LIME
Ohio Hydrate & Supply Co., Woodville, Ohio U. S. Gypsum Co., Chicago
Woodville Lime Products Co., Toledo, Ohio WAX—FLOOR
American Floor Surfacing Machine Co., Toledo, Ohio Armstrong Cork Co., Lancaster, Pa.
Breinig Bros., Hoboken, N. J.
E. L. Bruce Co., Memphis, Tenn.
Congoleum-Nairn Inc., Kearny, N.J.
Pittsburgh Plate Glass Co., Pittsburgh, Pa.
L. Sonneborn Sons, Inc., New York
Tile-Tex Co., Chicago Heights, Ill.
WAXING MACHINES—
See Machines, Waxing
WEATHERSTRIPS
Allmetal Weatherstrip Co., Chicago
Andersen Corp., Bayport, Minn.
Curtis Companies, Clinton, Iowa
W. J. Dennis & Co., Chicago
Hilger Co., St. Cloud, Minn.
Master Metal Strip Service, Inc., Chicago
Monarch Metal Weatherstrip Corp., St.
Louis, Mo.
Protex Metal Weatherstrip Co., Chicago
WEATHERSTRIP TOOLS—
See Tools, Weatherstrip
WEATHERSTRIP TOOLS—
See Tools, Irvington, N.J.
WHEELBARROWS—ALL KINDS
Construction Machinery Co., Waterloo, Iowa
Lansing Co., Lansing, Mich.
Sterling Wheelbarrow Co., Milwaukee, Wis. PAPER YOUR WALLS Lloyd's Wallpapers will make the rooms of your home more cheerful. Experience the joy of colorful warmth of wallpapers and you will never return to the dingy cold of plain walls INSPECTION INVITED Lova coinc. W. H.S. WINDOWS—CASEMENT (Aluminum and Bronze)
Kawneer Co., Niles, Mich.
WINDOWS—CASEMENT (Steel)
Detroit Steel Products Co., Detroit, Mich.
Mesker Brothers, St. Louis, Mo.
Vento Steel Products Co., Muskegon, Mich.
WINDOWS—CASEMENT (Wood)
Andersen Corp., Bayport, Minn.
Carr, Adams & Collier Co., Dubuque, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Florida Louisiana Red Cypress Co., Jacksonville, Fla.
Huttig Mfg. Co., Muscatine, Iowa
National Door Mfrs. Assn., Chicago
—See page 224
Weyerhaeuser Sales Co., St. Paul, Minn.
WINDOWS—DOUBLE-HUNG (Aluminum and Bronze)
Kawneer Co., Niles, Mich.
WINDOWS—DOUBLE-HUNG (Steel)
Detroit Steel Products Co., Detroit, Mich.
Mesker Brothers, St. Louis, Mo.
Vento Steel Products Co., Muskegon, Mich.
WINDOWS—DOUBLE-HUNG (Wood)
Andersen Corp., Bayport, Minn.
Carr, Adams & Collier Co., Dubuque, Iowa
Huttig Mfg. Co., Muscatine, Iowa
N. S. W. Co., Detroit, Mich.
National Door Mfrs. Assn., Chicago
—See page 224
Weyerhaeuser Sales Co., St. Paul, Minn.
WINDOWS—FACTORY (Steel)
Detroit Steel Products Co., Detroit, Mich.
Mesker Brothers, St. Louis, Mo.
Vento Steel Products Co., Detroit, Mich.
Mesker Brothers, St. Louis, Mo.
Vento Steel Products Co., Detroit, Mich.
Mesker Brothers, St. Louis, Mo.
Vento Steel Products Co., Detroit, Mich.
Mesker Brothers, St. Louis, Mo.
Vento Steel Products Co., Detroit, Mich.
Mesker Brothers, St. Louis, Mo.
Vento Steel Products Co., Muskegon, Mich.
WINDOWS—GARAGE (Steel)
Detroit Steel Products Co., Muskegon, Mich.
WINDOWS—GARAGE (Wood)
Andersen Corp., Bayport, Minn.
Carr, Adams & Collier Co., Dubuque, Iowa
Curtis Companies, Inc., Clinton, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Curtis Companies, Inc., Clinton, Iowa
Farley & Loetscher Mfg. Co., Dubuque, Iowa WINDOWS—CASEMENT (Aluminum

-CEMENT

Huttig Mfg. Co., Muscatine, Iowa National Door Mfrs. Assn., Chicago —See page 224 Weyerhaeuser Sales Co., St. Paul, Minn. National Door Mfrs. Assn., Chicago
—See page 224

Weyerhaeuser Sales Co., St. Paul, Minn.
WINDOWS—HOGHOUSE (Steel)
Detroit Steel Products Co., Detroit, Mich.
Mesker Brothers, St. Louis, Mo.
Milcor Steel Co., Milwaukee, Wis.
Vento Steel Co., Milwaukee, Wis.
Vento Steel Products Co., Muskegon, Mich.
WINDOWS—HOLLOW METAL
Donley Brothers Co., Cleveland, Ohio
Edwards Mfg. Co., Cincinnati, Ohio
Mesker Brothers, St. Louis, Mo.
WINDOWS—HORIZONTAL SLIDING
Andersen Corp., Bayport, Minn.
WINDOWS—PUTTYLESS
Detroit Steel Products Co., Detroit, Mich.
Donley Brothers Co., Cleveland, Ohio
Farley & Loetscher Mfg. Co., Dubuque, Iowa
Gabriel Steel Products Co., Detroit, Mich.
Majestic Co., Huntington, Ind.
Mesker Brothers, St. Louis, Mo.
Vento Steel Products Co., Muskegon, Mich.
WINDOWS—REVERSIBLE (Metal)
Detroit Steel Products Co., Detroit, Mich.
Mesker Brothers, St. Louis, Mo.
WINDOWS—REVERSIBLE (Wood)
Weyerhaeuser Sales Co., St. Paul, Minn.
WINDOWS—ROOF (Steel)
Detroit Steel Products Co., Detroit, Mich.
Mesker Brothers, St. Louis, Mo.
WINDOWS—ROOF (Wood)
Carr, Adams & Collier Co., Dubuque, Iowa
Huttig Mfg. Co., Muscatine, Iowa
Weyerhaeuser Sales Co., St. Paul, Minn.
WINDOWS—WIRE GLASS
Detroit Steel Products Co., Detroit, Mich.
Wire—INSULATED
General Electric Co., Appl. & Merch. Dept.,
Bridgeport, Conn.
National Electric Products Corp., Pittsburgh,
Ps.
WIRE—STOVE PIPE
Reynolds Wire Co., Dixon, Ill. Pa.

WIRE—STOVE PIPE
Reynolds Wire Co., Dixon, Ill.

WIRE CLOTH—
See Cloth, Screen
WIRE DOORS—
See Doors, Wire See Doors, Wire WIRE GLASS— See Glass, Wire WIRE GRATINGS— WIRE GRATINGS—
See Gratings, Wire
WIRE NETTING—
See Netting, Wire
WIRING EQUIPMENT—ELECTRIC
Frank Adam Electric Co., St. Louis, Mo.
General Electric Co., Appl. & Merch. Dept.,
Bridgeport, Conn.
National Electric Products Corp., Pittsburgh, Pa.
Square D Co., Detroit, Mich.
WIRING—TELEPHONE
General Electric Co., Appl. & Merch. Dept.,
Bridgeport, Conn.
Mid-States Steel & Wire Co., Crawfordsville,
Ind.
National Electric Products Corp., Pittsburgh. National Electric Servatives—
Pa.
WOOD PRESERVATIVES—
See Preservatives, Wood
WOOD SHINGLES—
See Roofing
WOOD PRESERVING SERVICE
American Lumber & Treating Co., Chicago
WOODWORK
Arkansas Soft Pine Bureau, Little Rock, Ar American Lumber & Treating Co., Chicago WOODWORK
Arkansas Soft Pine Bureau, Little Rock, Ark.—See page 224
Bradley Lbr. Co. of Arkansas, Warren, Ark. Carr, Adams & Collier Co., Dubuque, Iowa Curtis Companies, Inc., Clinton, Iowa Farley & Loetscher Mfg. Co., Dubuque, Iowa Huttig Mfg. Co., Muscatine, Iowa Ponderosa Pine Woodwork, Chicago—See page 224
Western Pine Assn., Portland, Ore.—See page 224
Western Pine Assn., Portland, Ore.
—See page 224
Weyerhaeuser Sales Co., St. Paul, Minn.
WOODWORKERS—COMBINATION
American Saw Mill Machinery Co., Hackettstown, N.J.
Delta Mfg. Co., Chicago, Ill.
DeWalt Products Corp., Lancaster, Pa.
Master Woodworker Mfg. Co., Detroit, Mich.
Parks Woodworking Machine Co., Cincinnati, Ohio
Porter-Cable Machine Co., Syracuse, N.Y.
Walker-Turner Co., Plainfield, N. J.
WOODWORKING JOINTERS—
See Jointers
WOODWORKING JOINTERS—
See Jointers Walker-Turner Co., Plainfield, N. J.

WOODWORKING JOINTERS—
See Jointers

WOODWORKING MACHINERY—
See Machinery, Woodworking

WOOL—MINERAL

Barrett Co., New York
Philip Carey Co., Lockland, Cincinnati, Ohio
Celotex Corp., Chicago
Flintkote Co., New York
Ford Roofing Products Co., Chicago
Hilger Co., St. Cloud, Minn.
Insulite Co., Minneapolis, Minn.
Johns-Manville, New York
National Lead Co., New York
Ruberoid Co., New York
U. S. Gypsum Co., Chicago
Woodville Lime Products Co., Toledo, Ohio
WRECKING BARS—
See Bars, Wrecking
WROUGHT IRON TRELLIS
Cincinnati Iron Fence Co., Cincinnati, Ohio
ZINC NAILS
See Nails, Roofing
ZINC PAINT PASTE—
See Paste, Zinc Paint

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TRIC Dept.,

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Minn. TION Hacketts-

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ACME, ACME-TWIN Sash Balances, Acme Spring Sash Balance Co., Los Angeles, Calif.

ACOUSTILITE, Fiberboard Acoustical Treatment, Insulite Co., Minneapolis, Minn.

ADMIRAL Floor Sanders, Hilger Co., St. Cloud, Minn.

ADRIAN, STAR AND BEN HUR Fence, Mid-States Steel & Wire Co., Crawfordsville, Ind.

AIR SLAB, AIR-O-KORE, Veneered Doors, Farley & Loetscher Mfg. Co., Dubuque, Iowa.

AIRTEMP Heating and Air Conditioning Equipment, Airtemp Division, Chrysler Corp., Dayton, Ohio

AJAX, Ladder, Roof and Shingling Brackets, Ajax Building Bracket Co., Cleveland Heights, Ohio.

AKLO, Heat-Absorbing Plate Glass, Libbey-Owens-Ford Glass Co., Toledo, Ohio

ABRON, Pigments for Aluminum Paint, Aluminum Co. of America, Pittsburgh, Pa.

ALCOA, Aluminum, Aluminum Co. of America, Pittsburgh, Pa.

ALLEGHENY METAL, Allegheny Ludlum Steel Corp., Pittsburgh, Pa.

ALLITH, Hardware, Allith-Prouty, Inc., Danville, Ill.

ALLMETAL Weatherstrip, Allmetal Weatherstrip Co., Chicago ALUMINA, Electro-Galvanized Screen Cloth, Reynolds Wire Co., Dixon, Ill.

AMBRAC, Copper Metals, American Brass Co., New York
AMERICAN, AMERICAN-PONTIAC, Gas-Fired Water Heaters, Hotstream Heater Co., Cleveland, Ohio
AMERICAN, Saw Mill Machinery and Contractors Hoists, American
Saw Mill Machinery Co., Hackettstown, N.J.
AMERICAN, Floor Polishing, Sanding and Surfacing Machines, American Floor Surfacing Machine Co., Toledo, Ohio
AMERICAN FLUSH Solid Core Door, American Plywood Corp., New
London Wish

AMERICAN, Floor Polishing, Sanding and Surracing Machines, American Floor Surfacing Machine Co., Toledo, Ohio
AMERICAN FLUSH Solid Core Door, American Plywood Corp., New London, Wis.

AMERICAN, Heating Equipment, American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.

AMERICAN PENTRA-SEAL, Penetrating Floor Finish, American Floor Surfacing Machine Co., Toledo, Ohio

AMERICAN SANDERPLANE, Belt Sander, American Floor Surfacing Machine Co., Toledo, Ohio

AMERICAN SPINNER, Disc Sander, American Floor Surfacing Machine Co., Toledo, Ohio

AMERICAN SPINNER, Disc Sander, American Floor Surfacing Machine Co., Toledo, Ohio

AMEROCK Cabinet Hardware, American Cabinet Hardware Corp., Rockford, Ill.

ANACONDA, Products of American Brass Co., New York

ANDERSEN, Basement Windows, Casement Windows, Horizontal Sliding Windows, Master Frames, ANDERSEN NARROLINE, Double Hung Windows, Andersen Corp., Bayport, Minn.

ARISTO-BRIC Insulating Siding, Ruberoid Co., New York

ARKANSAS SOFT PINE, Interior Trim, End-Matched and Plain End Flooring, and Common Lumber, Arkansas Soft Pine Bureau, Boyle Bldg., Little Rock, Ark.

ARMCO, Ingot Iron, American Rolling Mill Co., Middletown, Ohio

ARMCO PAINTGRIP, Galvanized Sheets, American Rolling Mill Co., Middletown, Ohio

ARMCO SEAL-KRIMP, Metal Roofing, American Rolling Mill Co., Middletown, Ohio

ARMCO, Stainless Steel, American Rolling Mill Co., Middletown, Ohio

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ARMCO, Stainless Steel, American Rolling Mill Co., Middletown, Ohio

ARMCO, Stainless Steel, American Rolling Mill Co., Middletown, Ohio

ARMCO, Holdletown, Ohio

ARMCO, Lincleum, Armstrong Corp Co., Lancaster, Pa.

BALSAM-WOOL, Insulating Blanket, Wood Conversion Co., St. Paul,

BALSAM-WOOL, Insulating Blanket, Wood Conversion Co., St. Paul,
Minn.

BARBER GENASCO, Roofings, Shingles, Sidings, Asphalt Coatings,
Insulating Felts, Asphalt Mastic, Barber Asphalt Corp., Barber, N.J.

BARB-LOCK, Shingles, Barber Asphalt Corp., Barber, N.J.

BARB-LOCK, Shingles, Barber-Colman Co., Rockford, Ill.

BARLIK, Wall Board, Tylac Co., Monticello, Ill.

BARETT HOLT, Roof Rings, Vents and Connections, Barrett Co.,
New York

BEAVER, Wall Board; Gypsum Board; Gypsum Sheathing; Gypsum
Plaster, Certain-teed Products Corp., New York

BECKMAN-DAWSON, Shingles and Sidings, Flintkote Co., New York
BESTWALL, Gysum Wallboard, Certain-teed Products Corp., New York
BILDCOST Home Plans, Better Homes & Gardens, Des Moines, Iowa
BILDRITE, Sheathing, Insulite Co., Minneapolis, Minn.
BIENDTEX, Insulating Plank and Tile, U.S. Gypsum Co., Chicago
BLUBAG Finishing Hydrated Lime, and Lime Products, Woodville
Lime Products Co., Toledo, Ohio
BULE RIDGE Figured and Wire Glass, Libbey-Owens-Ford Glass Co.,
Toledo, Ohio
BONDERIZING, Process of Metal Protection, Parker Rust Proof Co.,
Detroit, Mich.

BONDLITE, Interior and Exterior Oil Paste Paint, Wilbur & Williams
Co., Boston, Mass.

BOSS, Mixers, Hoists, Concrete Carts, American Cement Machine Co.,
Keckuk, Ia.

BRIK-STRIP Asphalt Siding, Ruberoid Co., New York
BRILMENT, Masonry and Stucco Cement, Non-Staining Stone Mason's
Cement, Louisville Cement Co., Louisville, Ky.

BRYCO-VAR, 4 hour All-Purpose Varnish, Breinig Bros., Inc., Hoboken,
N.J.

CADWALL-PHILIPPANEL, Solid Philippine Mahogany Paneling, Cadwallader Gibson Co., Los Angeles, Calif.
CAPITOL, Hot Water and Steam Boilers and Radiators, U. S. Radiator Corp., Detroit, Mich.
CAPITOLAIRE, Warm Air Furnaces, U. S. Radiator Corp., Detroit, Mich.
CAREYSTONE, Asbestos Cement, Shingles, Scored Sheathing, Philip Carey Co., Lockland. Cincinnati, Ohio.
CARRARA, Structural Glass, Pittsburgh Plate Glass Co., Pittsburgh, Pa. CARR-dor, Overhead Acting Garage Door, Carr, Adams & Collier Co., Dubuque, Iowa.
CARSTENITE, Wall Covering, Marsh Wall Products, Inc., Dover, Ohio. CEDA'LINE, Closet Lining, E. L. Bruce Co., Memphis, Tenn.
CEDARTEX Asphalt Shingles and Siding, Flintkote Co., New York.
CELLOWARE, Bathroom Fixtures, B & T Floor Co., Columbus, Ohio CELL-U-BLANKET Insulation, Masonite Corp., Chicago
CELOTEX VAPOR-SEAL, Lath, Sheathing, and Roof Insulation Celotex Corp., Chicago

CELOTEX CEMESTO, Asbestos Cement Insulating Wall Board, Celotex Corp., Chicago
CELOTEX DOUBLE DUTY Shingles, Celotex Corp., Chicago
CELOTEX TEXBORD, Interior Wall Finish, Celotex Corp., Chicago
CELOTEX TRAFFIC TOP, Celotex Corp., Chicago
CELOTEX TRIPLE-SEALED, Roofing Products, Celotex Corp., Chicago
CEMCOAT, Filler and Dustproofer and Interior and Exterior Paints, L. Sonneborn Sons, Inc., New York, N. Y.
CEMENTICO, Masonry Paint, U. S. Gypsum Co., Chicago
CENTURY PROGRESS, Flooring, Masonite Corp., Chicago
CENTURY PROGRESS, Flooring, Masonite Corp., Chicago
CERTIGRADE, Red Cedar Shingles, Red Cedar Shingle Bureau, Seattle, Wash.

Wash.
C. H. & E., Contractors Equipment, C. H. & E. Manufacturing Co.,
Milwaukee, Wis.
CHECK-MATE Wood Sealer and Primer, Wilbur & Williams Co., Boston,

Milwaukee, Wis.
CHECK-MATE Wood Sealer and Primer, Wilbur & Williams Co., Boston, Mass.
CHROMEDGE, Metal Mouldings, B & T Floor Co., Columbus, Ohio CLIMATOR Furnace Fans, L. J. Mueller Furnace Co., Milwaukee, Wis. CLOS-TITE Casements, Carr, Adams & Collier Co., Dubuque, Iowa CMC, Concrete Mixers, Hoists, Saw Rigs, Concrete Carts and Wheelbarrows, Construction Machinery Co., Waterloo, Iowa CMC, Dual Prime Contractors' Pumps, Construction Machinery Co., Waterloo, Iowa
COLOR CLEAR, Libbey-Owens-Ford Glass Co., Toledo, Ohio COLORCRETE, Brick, Cement, Stucco and Mortar Colors and Waterproof Coatings; Cement Brick, Concrete Block and Hollow Tile Machines and Molds, Colocrete Industries Inc., Holland, Mich. COMET Radial Power Saw, Consolidated Machinery & Supply Co., Los Angeles, Calif.
COMMANDER, Fibre Boards, Upson Co., Lockport, N. Y.
COPPER-BOUND Shingles, Ford Roofing Products Co., Chicago CRAFTCORD COVER-DRI Building Paper, Flintkote Co., New York CRAW-FIR-DOR, Fir Door Institute, Tacoma Bildg., Tacoma, Wash. C-S-I, Certain-teed Structural Insulation, Certain-teed Products Corp., New York
CS-I, Interior Finish; Tile Board; Finish Plank; Asphalted Sheathing; Asphalted Key Lap Lath; Roof Insulation, Certain-teed Products Corp., New York
CYCLONE Shingles, Ford Roofing Products Co., Chicago

DAMPCOAT Enamel, Wilbur & Williams Co., Boston, Mass.
DANDIE Mixers, Koehring Co., Milwaukee, Wis.
DECOBLEND Insulating Plank and Tile, Flintkote Co., New York
DELTABESTON, DELTAGLASS, Insulated Wire, General Electric Co.,
Appliance & Merch. Dept., Bridgeport, Conn.
DE LUXE, Kitchen Cabinets, Farley & Loetscher Mfg. Co., Dubuque,

DE LUXE, Kitchen Cabinets, Farley & Loetscher Mfg. Co., Dubuque, Iowa

DE LUXE QUARTRBOARD, Masonite Corp., Chicago
DENCO, Lead-Head Nails, The Deniston Co., Chicago
DENNING, Ornamental Picket Fence, Portable Corncribs, Illinois Wire
& Mfg. Co., Joliet, Ill.

DEXTER Tubular Hardware, National Brass Co., Grand Rapids, Mich.
DIXIE, Gas-Fired Automatic Water Heaters, Hotstream Heater Co.,
Cleveland, Ohio
DRAFTITE, Weatherstrip, Hilger Co., St. Cloud, Minn.
DRAFT-O-STATS, Domestic, Commercial and Industrial Draft Controls,
Hotstream Heater Co., Cleveland, Ohio
DREADNAUGHT, Floor Sanders, Speed Edgers, Whizz-ard Floor Surfacing Machines, and Portable Saws, Clarke Sanding Machine Co.,
Muskegon, Mich.

DUBBLSEAL Sheathing, Masonite Corp., Chicago
DUNBRIK, Cement Brick, W. E. Dunn Mfg. Co., Holland,
Mich.

DUNSTONE, Concrete Block Machine, W. E. Dunn Mfg. Co., Holland,
Mich.

Mich.

DUNTEX, Roofing Tile Machine, W. E. Dunn Mfg. Co., Holland, Mich.

DUNTEX, Roofing Tile Machine, W. E. Dunn Mfg. Co., Holland, Mich.

DUO-SEAL, Farley & Loetscher Mfg. Co., Dubuque, Iowa

DURACAL, Casein Powder Paint, U. S. Gypsum Co., Chicago

DUTCH BOY Red Lead and White Lead Paint Products, National Lead

Co., New York

DYE-CRETE Concrete Floor Paint, Wilbur & Williams Co., Boston,

Mass.

E-Z-GLAZE, Puttyless Sash, Farley & Loetscher Mfg. Co., Dubuque,

E-Z-GLAZE, Puttyless Sash, Farley & Loetscher Mig. Co., Dubuque, Iowa
E-Z-VENT, Storm Sash, Farley & Loetscher Mig. Co., Dubuque, Iowa
E-SSCO, Southern Pine; Southern Hardwoods; Ponderosa Pine; West
Coast Woods; Oak Flooring, Exchange Sawmills Sales Co., Kansas
City, Mo.
E-TERNIT, Asbestos Roofing Products, Ruberoid Co., New York, N. Y.
E-VERDUR, Metal, American Brass Co., New York
E-VEREADY, Combination Woodworker, Porter-Cable Machine Co.,
Syracuse, N. Y.
E-XTERIOR-D.F.P.A., Exterior Plywood, Douglas Fir Plywood Assn.,
Tacoma, Wash.
E-XTRUDALITE, Extruded Metal Shapes for Store Fronts, Libbey-Owens-Ford Glass Co., Toledo, Ohio

F
FA, Electric Wiring Equipment, Frank Adam Electric Co., St. Louis, Mo. FARLITE, Farley & Loetscher Mfg. Co., Dubuque, Iowa FARLO, FARLO-UNIQUE, FARLO-VENT, FARLO-KORE, Window FRARLO, FARLO-UNIQUE, FARLO-VENT, FARLO-KORE, Window FRARLOEX, Farley & Loetscher Mfg. Co., Dubuque, Iowa FARLOEX, Farley & Loetscher Mfg. Co., Dubuque, Iowa FEEDER BUSDUCT, Frank Adam Electric Co., St. Louis, Mo. FENESTRA, Screens and Insulating Windows, Detroit Steel Products Co., Detroit, Mich.

FENESTRA, Steel Windows, Package Windows, and Doors, Detroit Steel Products Co., Detroit, Mich.

FENESTRA HOLORIB, Steel Roof Deck, Detroit Steel Products Co., Detroit, Mich.

FIBERDUCT, Non-Metallic Under-floor Duct, General Electric Co., Appliance & Merch. Dept., Bridgeport, Conn.

FIBERLITE, Fiber Tile Board, Insulite Co., Minneapolls, Minn. 60-50, Garage Door Hardware, Allith-Prouty, Inc., Danville, Ill.

FIRZITE, Pretreatment for Fir. Breinig Bros., Inc., Hoboken, N. J. FLAMENOL S. D. Building Wire, General Electric Co., Appliance & Merch. Dept., Bridgeport, Conn.

FLEXBOARD, Asbestos Building Board, Johns-Manville, New York FLEXCELL, Expansion Joints, Celotex Corp., Chicago

FLEXGLASS, Flexible Glass Wall Covering Cloth-Backed, U. S. Plywood Corp., New York

FLEX-I-SLAB, Farley & Loetscher Mfg. Co., Dubuque, Iowa FLEXWOOD, Cloth-Backed Wood Veneers, U. S. Plywood Corp., New York

FLINTBOARD Hardboard, Flintkote Co., New York

FLINTBOARD Hardboard, Flintkote Co., New York

York FLINTBOARD Hardboard, Flintkote Co., New York FLINTLOCK Asphalt Shingles and Sheathing, Flintkote Co., New York

FLURESIT, Cement Waterproofing, Roof Coating and Foundation Damp proofing, American Fluresit Co., Cincinnati, Ohio FLUROSEAL Brick Mortar, Cement, FLUROSTONE Cement Floor Hardener, FLUROCRETE, FLUROMASTIC Cement Floor Repairing Materials, American Fluresit Co., Cincinnati, Ohio FOLLANSBEE SEAMLESS Terne Plate Roll Roofing, Follansbee Steel Corn. Pittshurgh Pa.

Corp., Pittsburgh, Pa.
-SQUARE LUMBER, Weyerhaeuser Sales Co., St. Paul, Minn.
-ORCE AIR Exhaust Fans, Victor Electric Products Inc., Cincinnati,

Onlo
FORD-VNEER, Ford Roofing Products Co., Chicago
FROSTBRAND Oak and Beech Flooring, Perfection Oak Flooring Co., Shreveport, La. FUNGISEAL, I. F. Laucks, Inc., Seattle, Wash.

GALVANITE Roofing, Ford Roofing Products Co., Chicago GAS ERA Furnaces and Boilers, L. J. Mueller Furnace Co., Milwaukee,

GAS ERA Furnaces and Boilers, L. J. Mucher Furnace Co., L. Wis.

GIBS DE LUXE Marbles and Wood Reproductions, Gibbs Boardtile Corp., Chicago
GILSONITE, Barber Asphalt Corp., Barber, N. J.
GLASTONE, Glass-Faced Masonry Units, Libbey-Owens-Ford Glass Co., Toledo, Ohio
GLIDE, Door Hangers & Track, Frantz Mfg. Co., Sterling, Ill.
GLOGAS, Fireplace Circulators and Grates, Superior Fireplace Co., Los Angeles, Calif.
GMC Motor Trucks, General Motors Truck & Coach Division, Pontiac, Mich.

Mich.
GORILLA GRIPS, Solderless Mechanical Connectors, National Electric Products Corp., Pittsburgh, Pa.
GRAYLITE, Fiber Tile and Wallboard, Insulite Co., Minneapolis, Minn.
GUILDCUTTER, Electric Hand Saw, Syracuse Gulld Tool Co., Syracuse,

GUILDSANDER, Portable Electric Belt Sander, Syracuse Guild Tool Co., Syracuse, N. Y.

HANDY SANDY STREAMLINER Floor Sanders, Hilger Co., St. Cloud,

Minn.
HANSCO One-Hand Automatic Tacker, A. L. Hansen Mfg. Co., Chicago HARBORSIDE, Plywood Siding, Harbor Plywood Corp., Hoquiam, Wash. HARBORD, Plywood, Sheathing, Doors; PLYCRETE Concrete Form Panels, Harbor Plywood Corp., Hoquiam, Wash.
HARTILE, Exterior Plywood Panels, Harbor Plywood Corp., Hoquiam,

Wash. HAWK SPREAD, White Lime Finish, Ohio Hydrate & Supply Co., Wood-

ville, Ohio

HAWTHORN, DEFENDER, ARROW, RUTHLESS, KICKAPOO, Barbed
Wire Fencing, Keystone Steel & Wire Co., Peoria, Ill.

HEADLINE Sash Balances, Acme Spring Sash Balance Co., Los Angeles,

Chiego

Calif. Wall Covering, Marsh Wall Products, Inc., Dover, Ohio
HERCULITE, Doors, Pittsburgh Plate Glass Co., Pittsburgh, Pa.
HILCO, "Handy Sandy," "Chief," "Commander," Floor Surfacing Machines, Hilger Co., St. Cloud, Minn.
HILO, Track, Frantz Mfg. Co., Sterling, Ill.
HOTPOINT Electric Appliances, Edison General Electric Appliance Co.,
Chiego

Chicago HYDROCIDE, Waterproofing and Dampproofing Products, L. Sonneborn Sons, Inc., New York

IDAHO WHITE PINE, Western Pine Assn., Portland, Ore.
INCOR, High Early Strength Portland Cement, Lone Star Cement Corp.,
New York

New York

INS-LITE, Building Board, Wall Board, Tile Board & Plank, Roof
Insulation, Cold Storage Insulation, Insulite Co., Minneapolis, Minn.

INSULUX Glass Block, Owens-Illinois Glass Company, Toledo, Ohio

IN-THE-DOOR, Farley & Loetscher Mfg. Co., Dubuque, Iowa

INVISIBLE Sash Balances, Grand Rapids Hardware Co., Grand Rapids.

JANITROL Gas Fired Heaters and Gas Conversion Burners, Surface Combustion Corp., Toledo, Ohio JUNIOR OVER THE TOP, Door Equipment, Frantz Mfg. Co., Sterling,

K
KAMKLAMP, Fuseholders, Frank Adam Electric Co., St. Louis, Mo.
KATHABAR Gas Fired Air Conditioners, Surface Combustion Corp.,
Toledo, Ohio
K-CEMO, Primer, U. S. Gypsum Co., Chicago
KIMSUL, Expanding Blanket Insulation, Kimberly-Clark Corp., Chicago
KOLORITE, Processed Red Cedar and Hand Split Shingles, Shingle Stain
and Zinc Coated Nails, Weyerhaeuser Sales Co., St. Paul, Minn.
KOLOR-TRIM, Mouldings, Wood Conversion Co., St. Paul, Minn.
KORPAK Concrete Block and Block Machines, W. E. Dunn Mfg. Co.,
Holland, Mich.
KOST KUTTER, Saw Rigs, Construction Machinery Co., Waterloo, Iowa
KUEHN'S, Half-Round and Square Gutter, Lock Seam Roll Roofing,
Milcor Steel Co., Milwaukee, Wis.
K-V HANDY-CLAMPS, Knape & Vogt Mfg. Co., Grand Rapids, Mich.
K-VENIENCE, Clothes Closet Fixtures, Knape & Vogt Mfg. Co., Grand
Rapids, Mich.

LAPIDENSIN Cement Waterproofing, American Fluresit Co., Cincinnati,

LAPIDOLITH, Liquid Concrete Floor Hardener, L. Sonneborn Sons, Inc.,

New York
LATITE. Shingles, Barber Asphalt Corp., Barber, N. J.
LAUXLITE, Synthetic Resin Paint (Water), I. F. Laucks, Inc., Seattle,

LAUXLITE, Synthetic Resin Paint (Water), I. F. Laucks, Inc., Seattle, Wash.

LAUXTEX, Plastic Paint (Water), I. F. Laucks, Inc., Seattle, Wash.

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LEAD-RED, Walls, Deniston Co., Detroit, Mich.

LEOHD, Nails, Deniston Co., Chicago

LIGNOPHOL, Wood Preservative and Finish, L. Sonneborn Sons, Inc., New York

LITH-I-BAR, Concrete Joists and Joist Machines, W. E. Dunn Mfg. Co., Holland, Mich.

LITHO-WOOD, Farley & Loetscher Mfg. Co., Dubuque, Iowa

LITTLE AMERICAN, Floor Sander, American Floor Surfacing Machine Co., Toledo, Ohio

LOETEX, Farley & Loetscher Mfg. Co., Dubuque, Iowa

LOK JOINT Lath, Fiberboard Plaster Base, Insulite Co., Minneapolis, Minn.

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LOK-JOINT Lath, Fiberboard Plaster Base, ...
Minn.
LOK-TITE Mitered Trim, Carr, Adams & Collier Co., Dubuque, Iowa
LOOMWIRE. Non-Metallic Sheathed Cable, National Electric Products
Corps, Pittsburgh, Ps.

LOUISIANA Pecan Flooring, Perfection Oak Flooring Co., Shreveport,

LUCKE LEAK-PROOF, Bath Tub Hangers, Wm. B. Lucke, Inc., Wil-

mette, Ill.

LUDLITE, Stainless Steel Wall Board, Allegheny Ludlum Steel Corp.,
Pittsburgh, Pa.

LUSTRAGLASS, Ultra Violet Ray Glass; LUSTRABLU and LUSTRAGOLD, Glass for Mirrors, Table Tops and Other Decorating Purposes, American Window Glass Co., Pittsburgh, Pa.

MAGIC DOORS, Stanley Works, New Britain, Conn.
MAGNATAB, Shingles, Barber Asphalt Corp., Barber, N. J.
MALLSAW, Portable Electric Saws, MALLPLANES, MALLMORTISERS,
Mall Tool Co., Chicago
MARCO, Folding Disappearing Stairs, Marschke Co., St. Paul, Minn.
MARLITE, Decorative Wall Panels, Marsh Wall Products, Inc., Dover,
Ohio

Ohio
MARVEL Sash Balances, Acme Spring Sash Balance Co., Los Angeles,

Caur. MASTAB, Shingles, Barber Asphalt Corp., Barber, N. J. MASTER NO-DRAFT, Sash Balances, Master Metal Strip Service, Inc.,

MASTER NO-DRAFT, Sash Baiances, Master Metal Strip Service, Inc., Chicago MASTITE, Masonry Mortar, Ohio Hydrate & Supply Co., Woodville,

Ohio MELLOGIOSS, MELLOTONE Wall Finishes, Lowe Brothers Co., Day-

ton, Ohio
MENGEL-BORD, Plywood Panels, Mengel Co., Louisville, Ky.
MFMA, Northern Hard Maple, Northern Beech, and Northern Birch
Flooring, Maple Flooring Mfrs. Assn., Chicago
MIAMI, Bathroom Cabinets, Miami Cabinet Division of The Philip Carey

MIAMI, Bathroom Cabinets, Miami Cabinet Division of The Philip Carey Co., Middletown, Ohio
MILCOR EXPANSION, Corner Beads, Base Screeds, Door and Window Casings, Milcor Steel Co., Milwaukee, Wis.
MITERTITE, Trim, Curtis Companies, Inc., Clinton, Iowa
MONARCH, Woodworking Machines, American Saw Mill Machinery Co.,
Hackettstown, N. J.
MONARCH METALANE, Weatherstrip, Monarch Metal Weatherstrip Corp., St. Louis, Mo.
MONCRIEF Heating and Air Conditioning Equipment, Henry Furnace
& Foundry Co., Cleveland, Ohio
MONOWALL, Decorative Wall Panels, Armstrong Cork Co., Lancaster, Pa.

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MULTI-BREAKER, Circuit Protectors, Square D Co., Detroit, Mich.

MURALAC, Plain Mirrored Surface Wall Panels, Tylac Co., Monticello,

NAIRN, Linoleum Floors and Walls, Congoleum-Nairn Inc., Kearny, N. J. NDMA SEAL OF APPROVAL on Preservative-Treated Doors, Sash, Frames, and Woodwork, National Door Mfrs. Assn., Chicago NEPCODUCT, Under Floor Wiring Systems, National Electric Products Corp. Pittshurch Page.

Corp., Pittsburgh, Pa. NEW LONDONER Hollow Core Door, American Plywood Corp., New

NEW LONDONER Hollow Core Door, American Flywood Corp., New London, Wis.

NON-SAG, Farley & Loetscher Mfg. Co., Dubuque, Iowa NON-STICK, Windows, N. S. W. Co., Detroit, Mich.

NUCITE Glass Chalkboard, Pittsburgh Plate Glass Co., Pittsburgh. Pa.

NU-STYLE Kitchen Cabinets, Carr, Adams & Collier Co., Dubuque, Iowa NU-WOOD, Kolor-Fast, Sta-Lite, Interior Finish, Wood Conversion Co., St. Paul, Minn.

OHIO RITEWALL, Fiber Lime Plaster, Ohio Hydrate & Supply Co., Woodville, Ohio
OHIO SANLIME, Plaster Finish and Interior Sand Finish (In Colors), Ohio Hydrate & Supply Co., Woodville, Ohio
ON-THE-WALL, Ironing Boards, Farley & Loetscher Mfg. Co., Dubuque, Iowa
OPTEX, Blackboard Glass, Libbey-Owens-Ford Glass Co., Toledo, Ohio
OVERFOLD, Garage Doors, Farley & Loetscher Mfg. Co., Dubuque, Iowa
OVERHEAD DOOR WITH THE MIRACLE WEDGE, Overhead Door
Corp., Hartford City, Ind.
OVER THE TOP, Door Equipment, Frantz Mfg. Co., Sterling, Ill.

PANELBESTOS, Asbestos-Cement Wall Board, Ruberoid Co., New York PARKERIZING, Process of Metal Protection, Parker Rust Proof Co., Detroit, Mich.

PAYNE SPACESAVER Cabinet Heater, Payne Furnace and Supply Co.,

PAYNE SPACESAVER Cabinet Heater, Fayne Furnace and Sapple Beverly Hills, Calif.
PC, Glass Blocks and Architectural Glass, Pittsburgh Plate Glass Co., Pittsburgh, Pa.
PENN-DIXIE, Portland Cement and High Early Strength Portland Cement, Pennsylvania-Dixie Cement Corp., New York
PENNVERNON, Window Glass, Pittsburgh Plate Glass Co., Pittsburgh, Pa

PHOENIX, Solid Braided Awning Line, Sash Cord, Samson Cordage Works, Boston, Mass. PIONEER Asbestos Sidings and Asphalt Shingles, Flintkote Co., New

PIONEER Asbestos Sidings and Asphalt Shingles, Flintkote Co., New York
PIVOT LIFT, Door Equipment, Frantz Mfg. Co., Sterling, Ill.
PLASTEREZ, Synthetic, Resin-beund Interior Wall Coating, I. F.
Laucks, Inc., Seattle, Wash.
PLASTICO, Latex Rubber, Moulage Materials, Warren-Knight Co.,
Philadelphia, Pa.
PLIAX, Enamel Finishes, Lowe Brothers Co., Dayton, Ohio
PLEXITE, Safety Glass, American Window Glass Co., Pittsburgh, PaPLUGIN BUSDUCT, Frank Adam Electric Co., St. Louis, Mo.
PLUG-IN STRIP, Surface Raceway Wiring Systems, National Electric
Products Corp., Pittsburgh, Pa.
PLYFORM, Concrete Form Panel, Douglas Fir Plywood Assn., Tacoms.
Wash.

PLYPANEL, Cabinet Paneling, Douglas Fir Plywood Assn., Tacoma, PLYPANEL, Cabinet Faneling, Bouglas Fir Plywood Assn., Tacoma, Wash.
PLYSCORD, Sheathing, Douglas Fir Plywood Assn., Tacoma, Wash.
PLYWALL. Wall Board, Douglas Fir Plywood Assn., Tacoma, Wash.
PONDEROSA PINE, Western Pine Assn., Portland, Ore.
POSITIVE, Latches, Frantz Mfg. Co., Sterling, Ill.
POTTSCO, Lightweight Concrete Aggregate, Celotex Corp., Chicago
PRESDWOOD, TEMPERED PRESDWOOD, PRESDWOOD TEMPRTILE, Wall Board, Plank and Tile, Masonite Corp., Chicago
PRESTO, Disappearing Stairs, Farley & Loetscher Mfg. Co., Dubuque,
Lowa

Iowa
PULLMAN UNIT, Sash Balances, Pullman Mfg. Corp., Rochester, N. Y.
PUL-TITE. Line Clamps, Stanley Works, New Britain, Conn.
PUSH-OVER, Overhead Door Hardware, Allith-Prouty, Inc., Danville.

Ill.
PYROFAX Bottled Gas, Pyrofax Gas Division, Carbide and Carbon Chemicals Corp., New York

QUALITYBILT, Woodwork, Farley & Loetscher Mfg. Co., Dubuque, QUARTREOARD, Wall Board, Masonite Corp, Chicago

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Danville

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Dubuque,

QUIKHETER, Built-in Electric Heaters, Frank Adam Electric Co., St. Louis, Mo.

RADIA, Electric Bathroom Heaters, Shepler Mfg. Co., Pittsburgh, Pa. RED BRAND, SQUARE DEAL, AND MONARCH Fence, Keystone Steel & Wire Co., Peoria, Ill.
RED DEVIL, Glass Cutters, Paint Conditioners, Wood Scrapers, Glaziers Tools, Wallpaper Removers, Floor Edgers, LAD-R-SHU, Fencers, Landon P. Smith, Inc., Irvington, N. J.
RED TOP, Plaster, Metal Lath, Insulating Wool, Lime, U. S. Gypsum Co., Chicago
RED TOP Steel Fence Posts and Aluminum Top Posts, Keystone Steel & Wire Co., Peoria, Ill.
REID-WAY OSCILLATOR Floor Finishing and terrazzo rubbing, Reid-Way Corp., Cedar Rapids, Iowa
RELIABLE, Fire Door Fixtures, Barn Door Hangers, Rolling Store Ladders, Overhead Trolleys and Track, Allith-Prouty, Inc., Danville, Ill.
REPREX, Mantels, Readybuilt Products Co., Baltimore, Md.
REVOLAIRE Circulating Fans, Victor Electric Products, Inc., Cincinnati, Ohio

REVOLAIRE CIrculating Pans, Victor Electric Products, Inc., Cincinnati, Ohio REX Roll Roofing, REXBOARD Hardboard, Flintkote Co., New York REZ, Clear, Synthetic, Resin Sealer and Primer for Plywoods, I. F. Laucks, Inc., Seattle, Wash. REZICOTE, Synthetic Resin Paste Paint, I. F. Laucks, Inc., Seattle,

REZICOTE, Synthetic Resin Paste Paint, I. F. Laucks, Inc., Seattle, Wash.
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Arkansas Soft Pine Bureau, Boyle Bldg., Little Rock, Ark., has published Arkansas Soft Fine Bureau, Boyle Bing., Little Rock, Ark., has published a number of booklets on the uses of Arkansas Soft Pine for framing, flooring, interior trim, and paneling. Of special interest is the Builder's Handbook, containing factual data on stress loads, correct construction methods, and painting and finishing instructions.

Douglas Fir Plywood Assn., 301 Tacoma Bldg., Tacoma, Wash., has available extensive files of technical data on Douglas Fir Plywood grading, specifications, production, and uses, with booklets showing numerous new applications. Data includes suggestions on proper types of plywood for various uses, suggested thicknesses, grades, etc.

Fir Door Institute, Tacoma Bldg., Tacoma, Wash. Literature shows prefit, stock entrance doors, and describes the Association's commercial standards or grade marks for stock doors. Other literature describes a new line of upward-acting garage doors of Douglas Fir.

Lead Industries Assn., 420 Lexington Ave., New York, has available booklets and technical data on the many protective, decorative, and structural uses of lead products in all types of structures, with particular attention devoted to the value of white lead for interior and exterior painting.

Maple Flooring Mfrs. Assn., 332 S. Michigan Ave., Chicago. Technical literature available defines and illustrates grades of flooring, and tells the purposes for which each is best suited, with data on durability. Give suggestions for proper laying, finishing, and decorative effects possible in various kinds of applications, also color illustrations of product.

National Door Mfrs. Assn., 332 S. Michigan Ave., Chicago, has published a manual of standard construction for stock sash, doors and frames, and of standard details for sash stickings, joint layouts, and six-panel Colonial door designs. The Association also has available technical literature on the preservative treatment of millwork.

Penderosa Pine Woodwork, 111 W. Washington St., Chicago, offen a book, "Open Houses," which illustrates many excellent and practical ideas for those planning a new home or remodeling an old home, showing how better light, more air, greater convenience, more comfort, and greater safety can be obtained by the use of quality doors and windows.

Portland Cement Assn., 33 W. Grand Ave., Chicago. Research labora tories are constantly at work on improvements in the use of portland cement and concrete. Technical and non-technical literature is available on the mixing, placing, forming, finishing, and reinforcing of concrete; also on the use of concrete products for homes and structures.

Red Cedar Shingle Bureau, White Bldg., Seattle, Wash., has literature on the grade marking of Certigrade Red Cedar Shingles. Plans and pictures of low-cost Certigrade homes are available. Literature includes data of proper laying of wood shingles on side-walls and roofs, and suggestions for remodeling.

Western Pine Assn., Yeon Bldg., Portland, Ore. Literature includes data on the size and scope of the industry, with descriptions of the many uses of Western Pine in construction. Special booklets show applications in home construction and farm buildings, with suggestions for installing and finishing knotty pine interior paneling and economy sidings.

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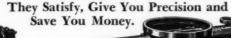
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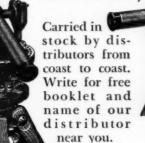
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" Suying Super Cynics





The world's worst cynics about the value of most advertising inquiries are salesmen who have to "run them down." And the super-cynics among them are commission men who pay their own expenses. Some simply pay no attention to advertising inquiries forwarded from the home office. But not so with AMERICAN BUILDER inquiries.

During the past month four different salesmen told their experiences with AMERICAN BUILDER inquiries. Each is a super-cynic who works on commission and pays his own expenses. They represent two different companies. They work in different states. Each spoke without knowledge of the others. Each handles equipment on which the minimum sale is about \$100 and may run into thousands.

Each salesman said that he regularly converts more than 60 per cent of inquiries received from AMERICAN BUILDER into actual orders. One said, "When the home office sends me an AMERICAN BUILDER inquiry I drop everything else and go after it, even though it may be halfway across the state." Another said, "Last year I converted 90 per cent of my AMERICAN BUILDER inquiries into orders."

If you have super-cynics, or just ordinary ones, on your sales force try a change of diet. Feed them some AMERICAN BUILDER inquiries* filled with Buying Vitamins and watch their indifference to advertising inquiries change.

*Obtained by advertising in AMERICAN BUILDER.

AMERICAN BUILDER

A Simmons-Boardman Publication

105 W. Adams Street CHICAGO 30 Church Street NEW YORK



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